



A few words about the Spot Matching System

The Spot Matching System (SMS) is originally created for so-called *Brand Design*, - i.e. for brands to use SMS colours in their official brand logos and as their official brand colours.

The system is a device-independent, LAB based, professional colour palette, containing a total of 5.214 colours for 21st Century demands in design, where *visual predictability and consistency in colour from product to marketing in any mainstream media is a key factor.*

Device-independent means that SMS colours don't depend on just one device - or media for that matter. Using modern icc colour management, they can be reproduced in RGB on digital displays and in process printing on coated or uncoated substrates, be it standard CMYK for offset, gravure or flexo printing presses, for digital printing on paper or textile. SMS colours can additionally be reproduced using analog paints and dyes.

The main advantage of the Spot Matching System is that both our standard SMS colours and our ECO colours fulfil the criteria that designers can use the same SMS colours consistently in standard CMYK printing on coated paper, CMYK printing on uncoated paper, for standard digital displays such as laptops, tablets and smart phone displays and on TV/Cinema, *maintaining the same colour(s) visually for side-by-side comparison.*

This consequently means that you can easily communicate the expected visual appearance of your SMS colours, as they should look when printed in CMYK on paper or when they are displayed online or on Television with your customer and stakeholders around the world instantly via email or a website to take the guesswork out of the equation and to speed up your work.

Since the Spot Matching System is based on fixed LAB values, of course any product can be manufactured in SMS colours using existing, proprietary inks or dyes to ensure correct colour of the final product. This means that any product manufactured and dyed using SMS colours can also be marketed colour correctly in any mainstream media to maximize customer satisfaction.

No other colour matching system can pull this off.



How to use the media neutral SMS colours for professional brand design.

Step-by-Step instructions

This presentation is intended for professional Designers that want to use the media neutral colours of the Spot Matching System without having to buy colours or other services from Spot-Nordic when the colours are required for other purposes than what their colourpalette is intended for (Web, TV, Textile, standard CMYK or other process Printing - analog or digital).

For correct evaluation of SMS colours, please view them on a monitor capable of displaying the sRGB colourspace at least.

Most decent monitors and even laptops and smartphones are capable of this but to be on the safe side please check - and make sure that your customer also has a decent monitor to evaluate colours in sRGB format (the standard for the Internet).

If you haven't already, please invest in a monitor calibrator + software and adjust your monitor to display sRGB colours correctly and recommend the same for you customer. Such calibration packages are available from, for instance, Datacolor (Spyder) and Lumesca (Calibrite/Xrite) for 2-400 Euros.

This may seem expensive but this is a one time investment and it will also ensure that images and entire layouts you view on your monitor will be much closer to what to expect, when you softproof them.

Remember that all monitors „trend“ and in a digital world it is as essential to keep your display colour correct, as it was renewing your Pantone guides every 12-18 months.

Otherwise the colours are simply no longer correct and you don't know what to expect from your Printer nor what your design SHOULD look like online.



How to use the media neutral SMS colours for professional brand design.

Step-by-Step instructions

You have a new customer and they have made it clear that they have been unhappy with how unstable their current logo and trademark colours have been in the different media and even within the same media.

So you decided to use the Spot Matching System colour palette to stay on the safe side to do at least what you can do to keep their colours consistent in all media.


When using SMS colours, you already know that all SMS colours are safe for both web and Television so the first step is to choose the papertypes you want to use for the customer.

You decide to use bright, white paper for marketing in print. The papertypes you chose to use for brochures and leaflets are in accordance with the papertypes used for printing to Fogra 51 standards (using the icc profile PSO Coated v3) and the paper you chose for the office material is suited for printing according to Fogra 52 using the PSO Uncoated v3 icc profile.

Now it is time for you to select your SMS colour palette.



Here is an overview of the available SMS colour palettes: Standard, ECO (e) and MAX (x).



	ECO	Standard	MAX
sRGB (Web/UI/AR/VR)	■	■	■
REC. 709 (Video)	■	■	■
REC. 2020 (Video)	■	■	■
Fogra 58 RGB (Digital Printing on Textile)	■	■	■
Fogra 39/ISO COATED V2 (Premium Coated paper)	■	■	■
Fogra 51/PSO COATED V3) (Premium Coated paper)	■	■	■
Fogra 47/ISO UNCOATED V2 (Premium Uncoated paper)	■	■	
GRACoL 2006 (Premium coated paper)	■	■	■
Japan Color 2011 (Premium coated paper)	■	■	■
Fogra 52/PSO UNCOATED V3 (Premium Uncoated Paper)	■	■	
CGATS21-2 CRPC6 (Premium Coated paper)	■	■	■
CGATS21-2 CRPC3 (Premium Uncoated paper)	■	■	
CGATS21-2 CRPC5 (Coated Publication Printing)	■		
CGATS21-2 CRPC1 (Coldset Newspaper)	■		
WAN-IFRA (ISO 12647-3 - Newspaper)	■		
Munken Lynx (White Uncoated Paper)	■	■	
Munken Pure (Off-White Uncoated Paper)	■		



Converting SMS colours from one colourspace to another

Step-by-Step instructions

Since you have established that you need to be able to print on both white coated and uncoated Premium paper, you have the choice of using either the Standard or the ECO colour palette.

You decide to use the Standard palette (P20) in sRGB format.

The P20 palettes are also available in REC 709 or REC 2020 format (for video graphics).

The colours of the SMS Standard palette are suited for printing to Fogra 51 and Fogra 52 standards, so it is safe to use it for this customer.

So you contact sms@spot-nordic.com and order your P20 colour palette.

The price is EUR 60 for version 4, which contains 869 SMS colours and EUR 90 for version 5 and the new version 6, which contain a total of 1738 colours each.

Optionally you can buy it online in our Spot-Nordic [webstore](#).

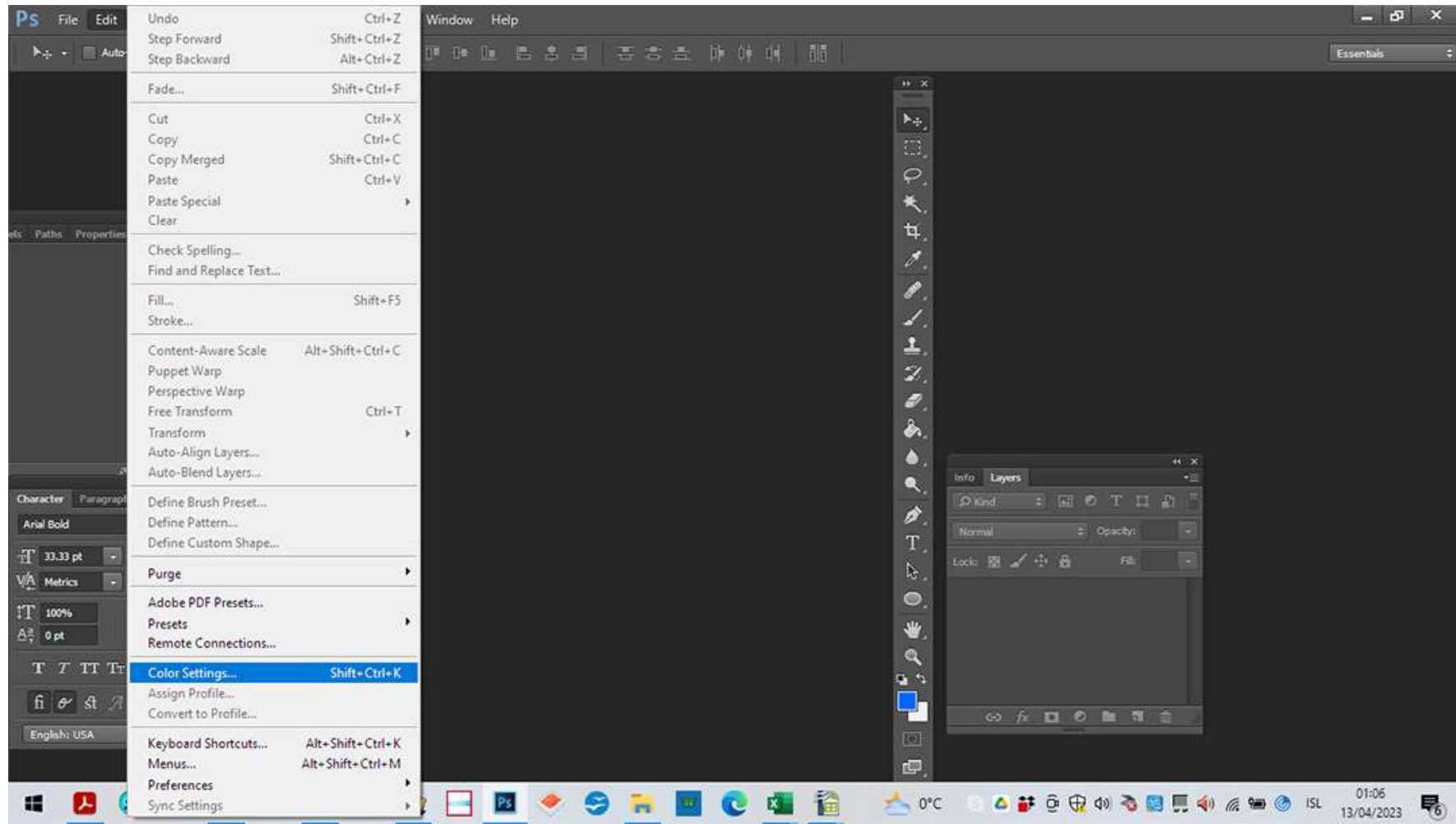
You decide to order the new Standard version 6 and the palette is then delivered to you by email in PDF and ASE format.

SMS colour palettes can also be delivered in other formats, such as jpg, png or tif on request.

Once you have your P20 colour palette, the first thing to do is to set up your workspace in Adobe Photoshop.

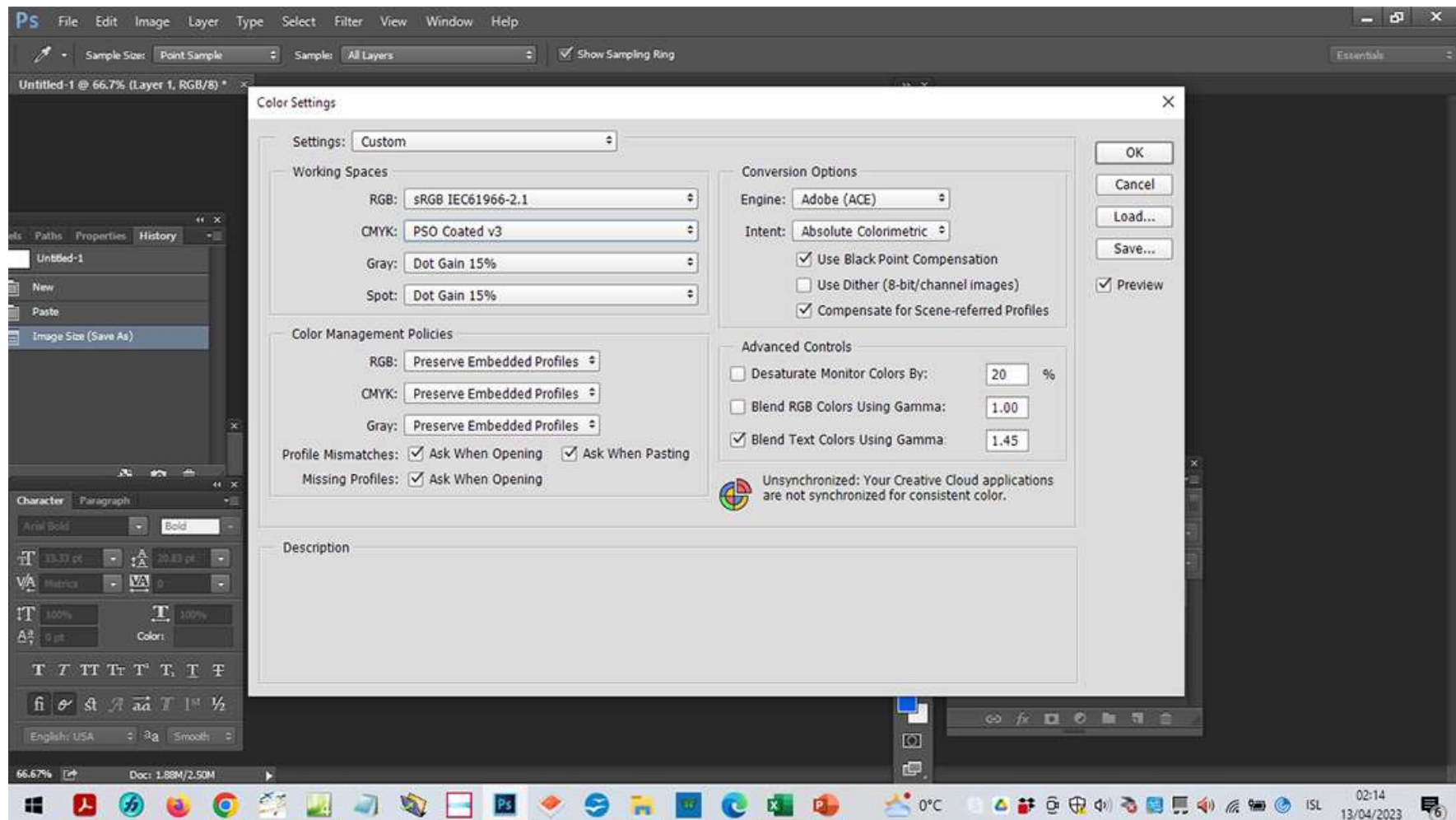


Open Photoshop Go to Colour Settings



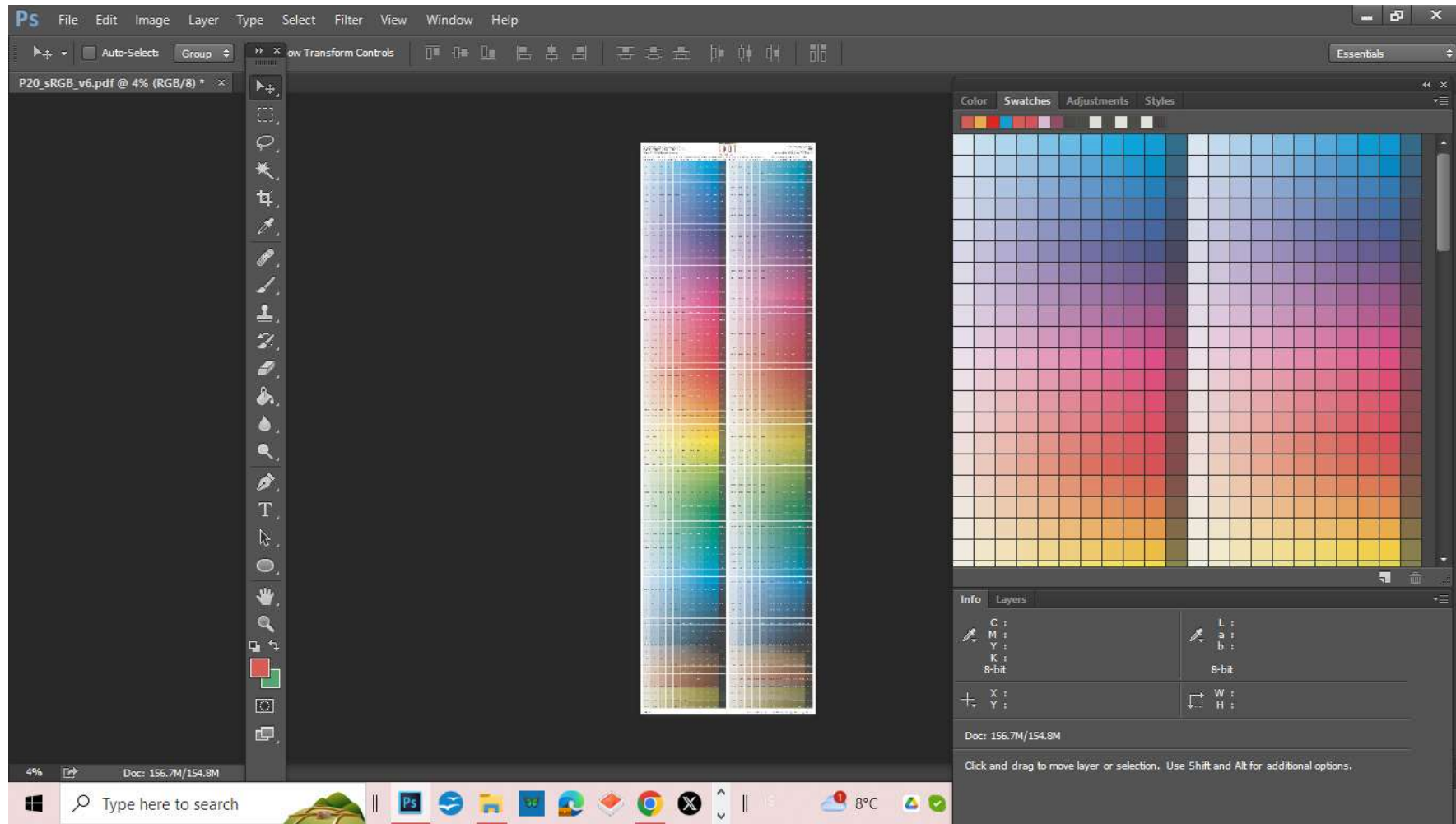


RGB to sRGB
CMYK to [PSO Coated v3](#) (click to download icc profile)
NOTE: Intent: **Absolute Colorimetric**



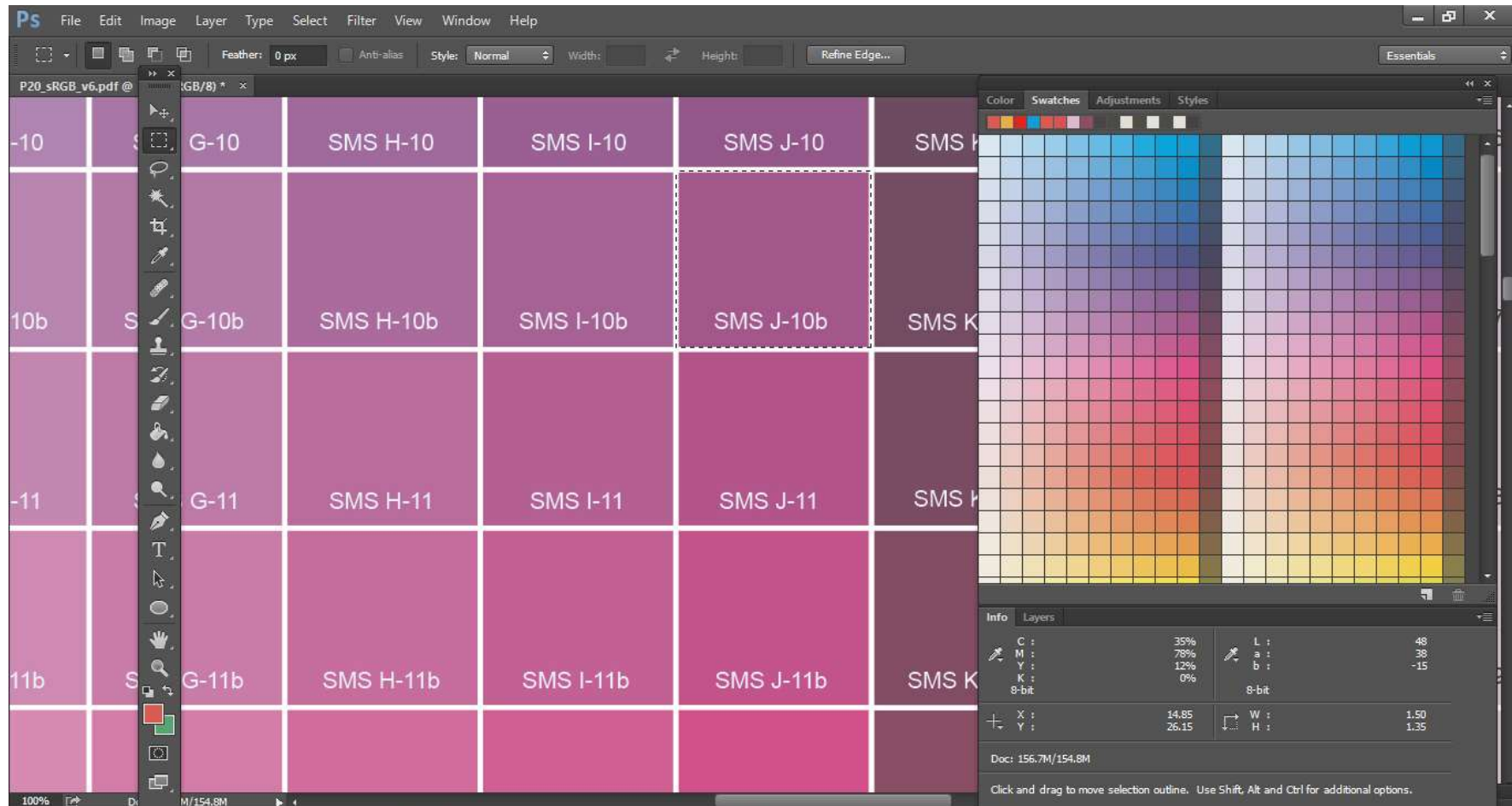


Open your SMS colour palette -
in this case the P20 Standard v6 colour palette
in sRGB format containing 1.738 colours.



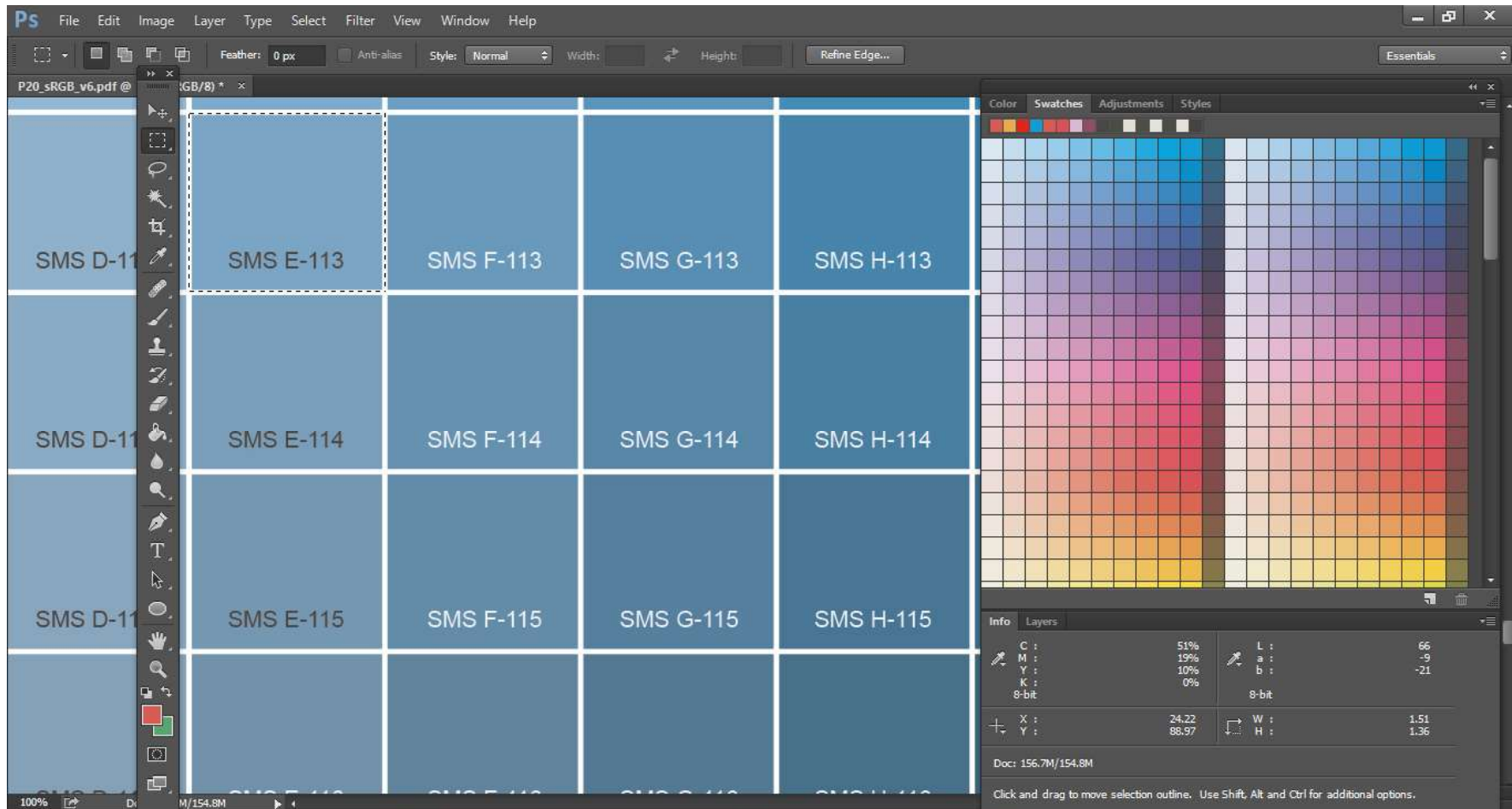


Pick out your first colour - any colour you like.
In our example we pick J-10b as our first colour.



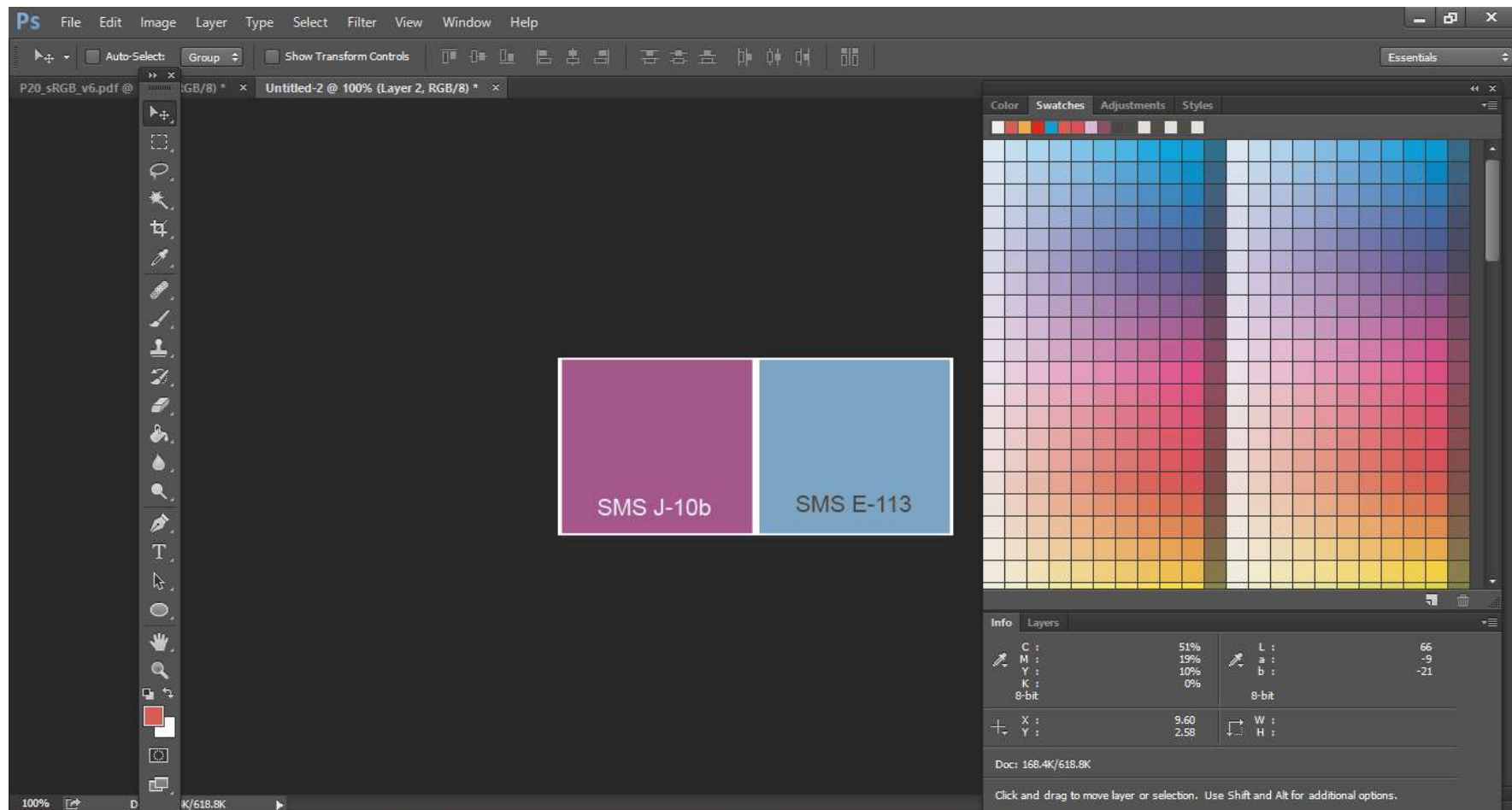


Pick out your second SMS colour.
In our example we pick one of the
newer SMS colours - SMS E-113



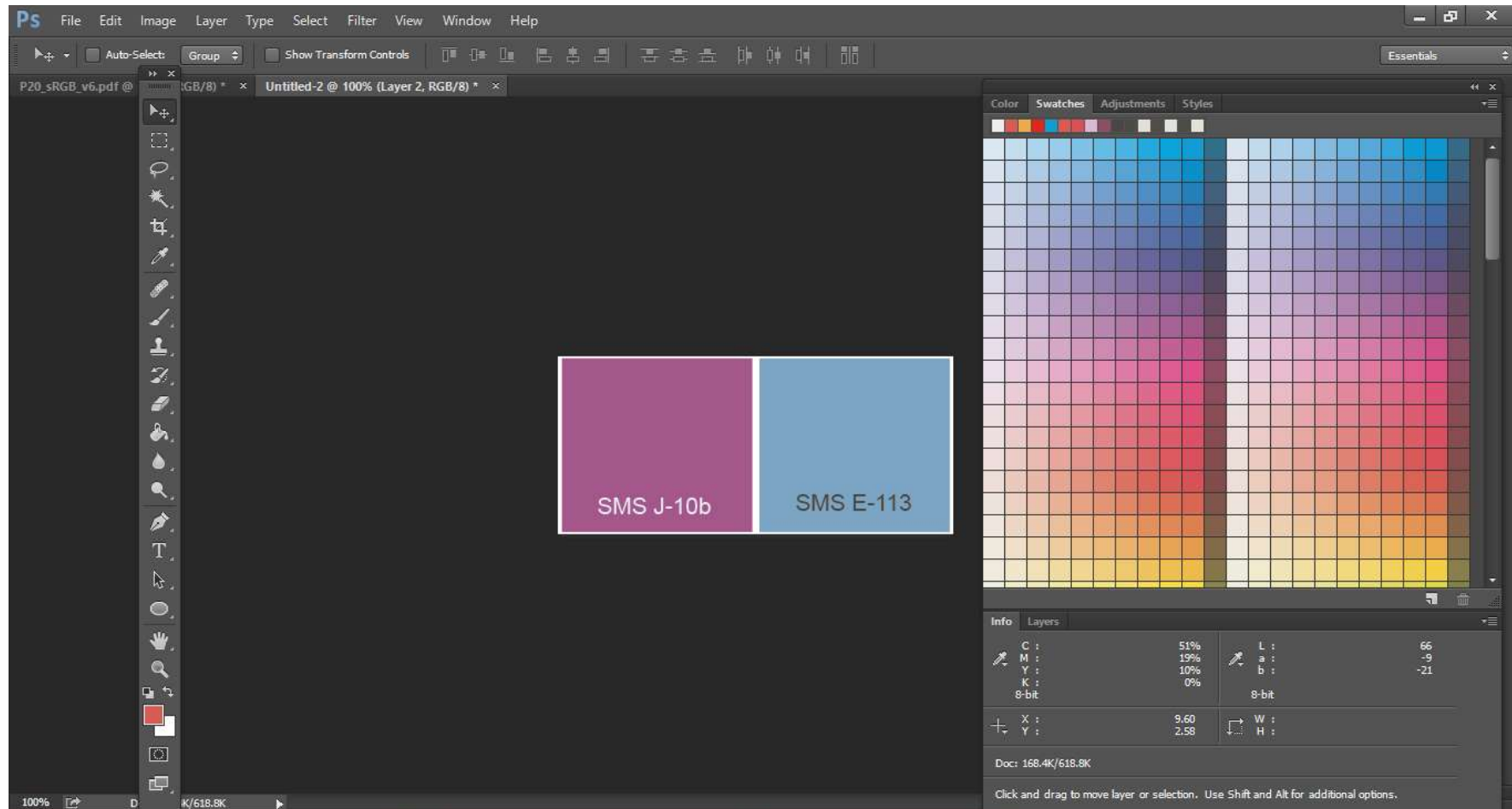


Copy your colours to a new document.
Save in your customer's folder as
Name of your choice_web version_sRGB_colours.jpg



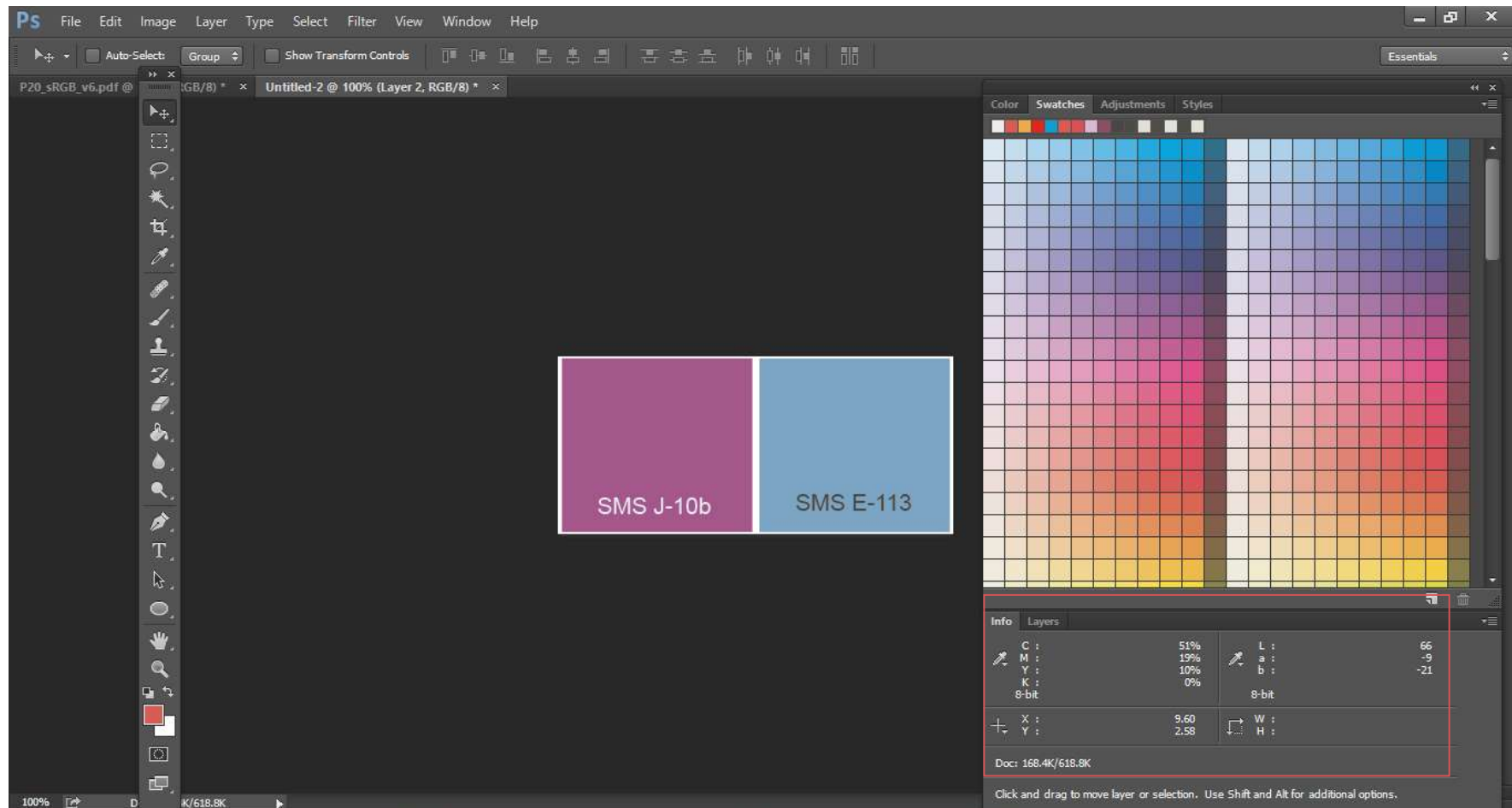


Make sure that you embed the sRGB icc profile with the file when you save it - in maximum quality.



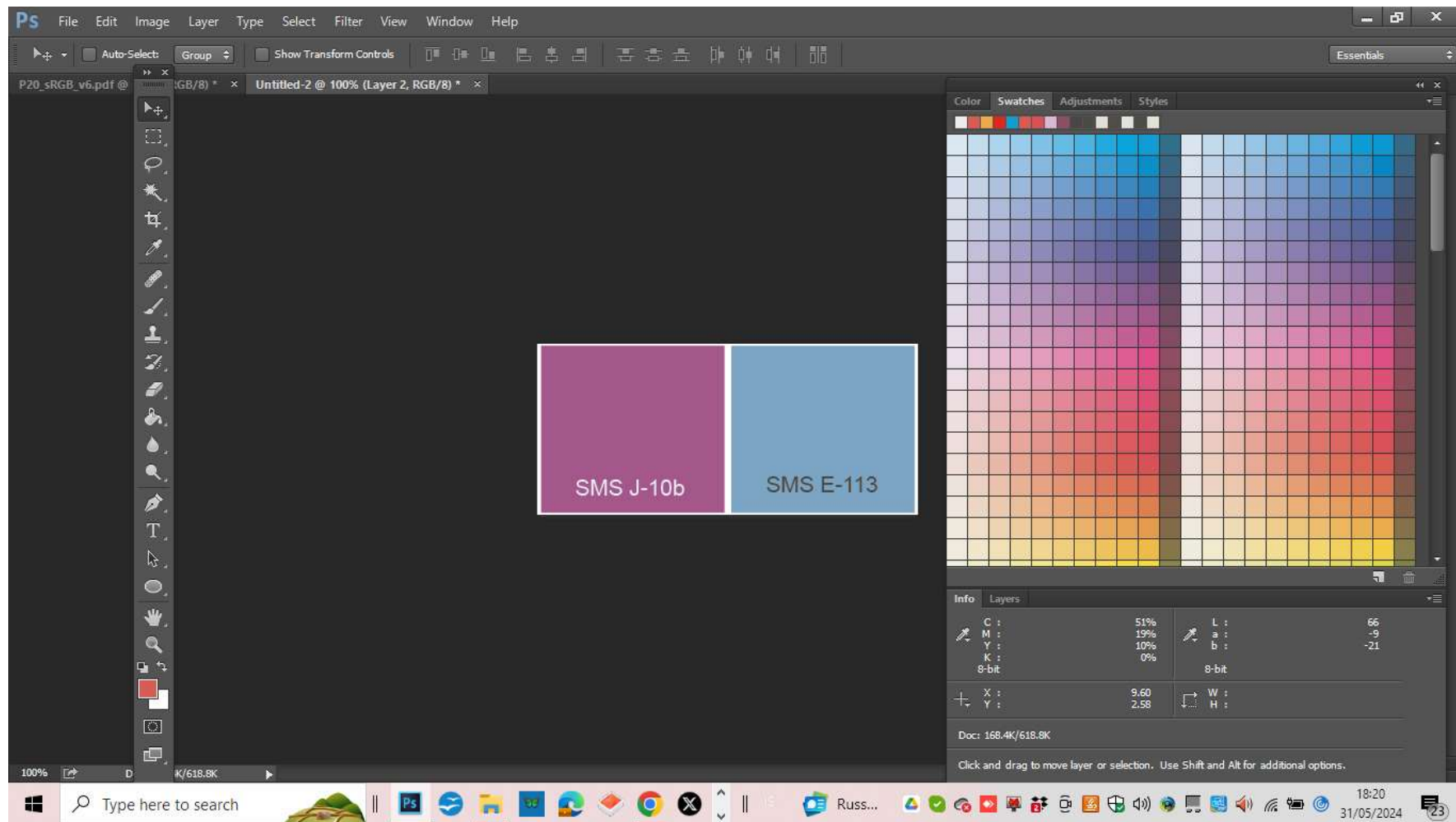


What we see here is the CMYK and **LAB** value of the light blue colour. Hover over the purple cube to see the same for the purple colour.



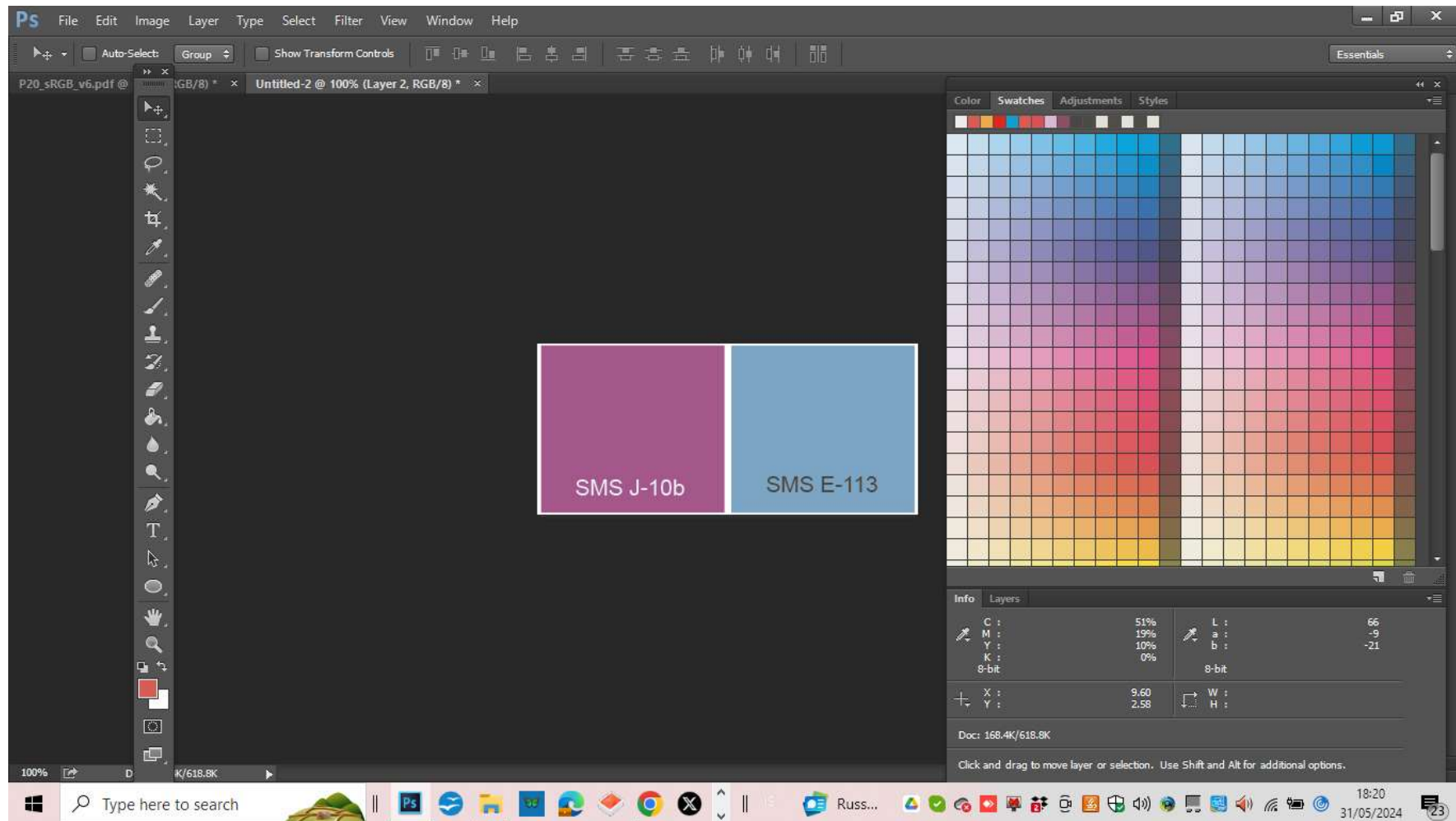


At this stage you can begin work on your project, present it to your customer and get his or her approval.





If you are only designing for print, you can of course do that.
In that case you can skip the next 2 slides.





Use the application(s) of your choice to do each job.

Suggested applications are:

Adobe Illustrator
Adobe Indesign
Adobe Photoshop
Affinity
CorelDraw

Make sure to use sRGB as the RGB colourspace and make sure that the document is an RGB document - not CMYK.

See instructions at www.spotmatchingsystem.com/gettingstarted

In short: Import your SMS colours in sRGB format to your workspace and use the Eyedropper tool to add your chosen SMS colours to your swatches.

Name them SMS number_sRGB

Begin work on your jobs.

Save each job with the colour space in the name - for instance name of customer_letterheads_sRGB.



Once you have finished all your jobs in sRGB format and gotten approval from your customer for the website, the letterheads/stationaries, envelopes, business cards leaflets and whatever they need for the launch of their new brand identity;

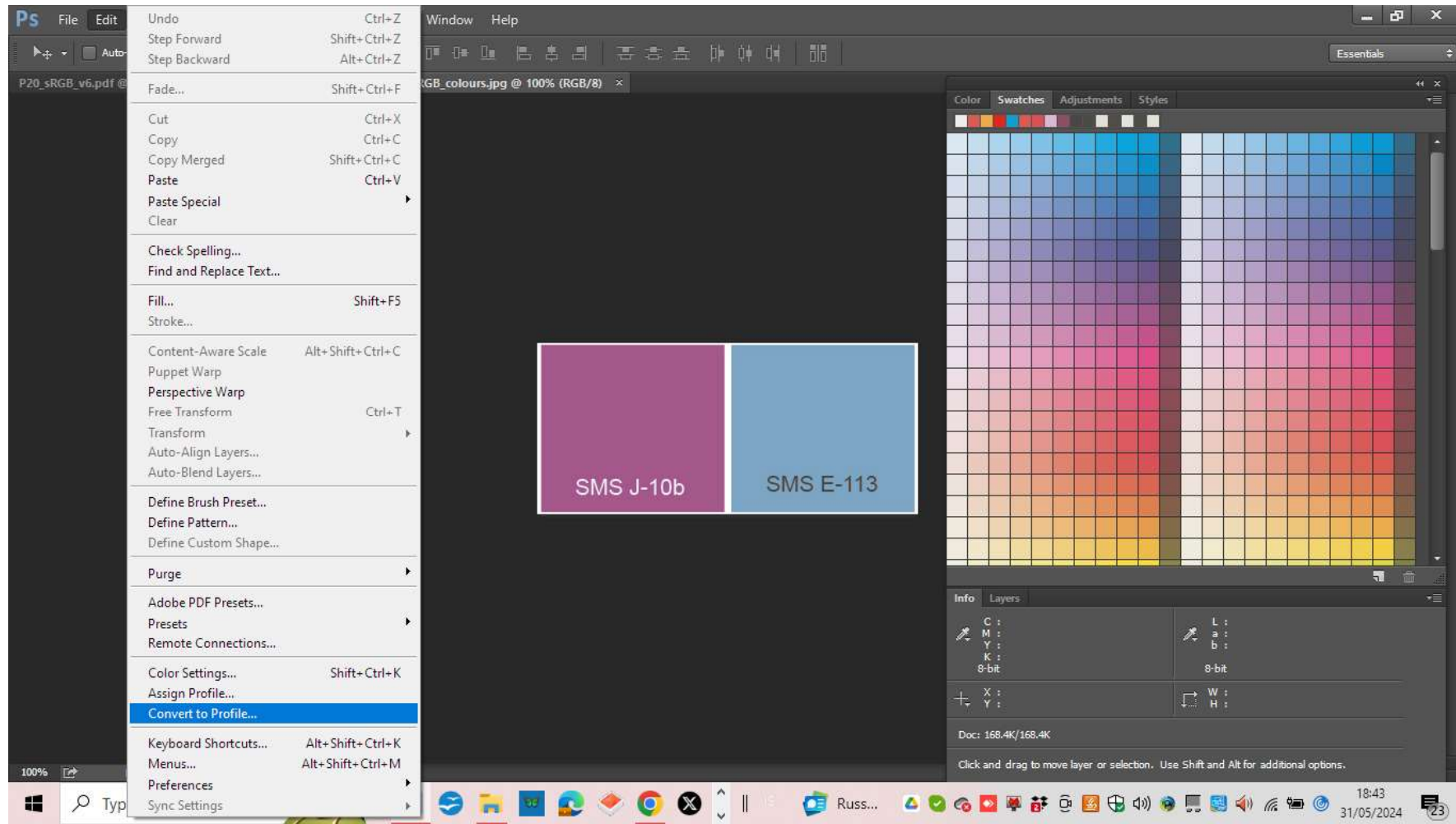
The next step is to create your Print colours.

In our example we want to convert our SMS colours to Fogra 51 CMYK for printing on coated paper and Fogra 52 CMYK for printing of the office-material on uncoated paper.

Feel free to use any of the other supported standards for the Standard system - see the list on slide 3.

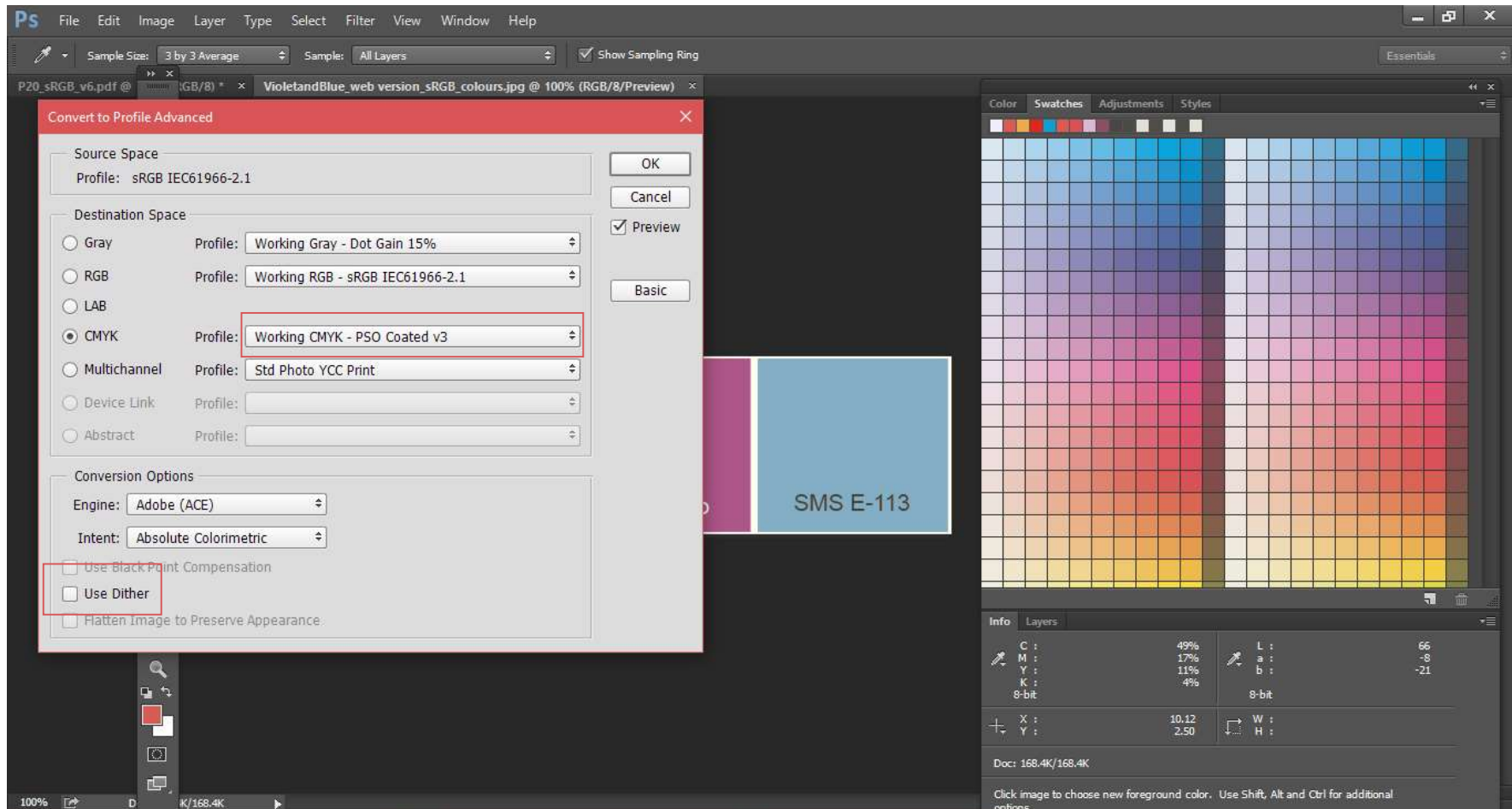


Open Name of your choice_web
version_sRGB_colours.jpg in Photoshop with the
same settings as before. Select Convert to profile



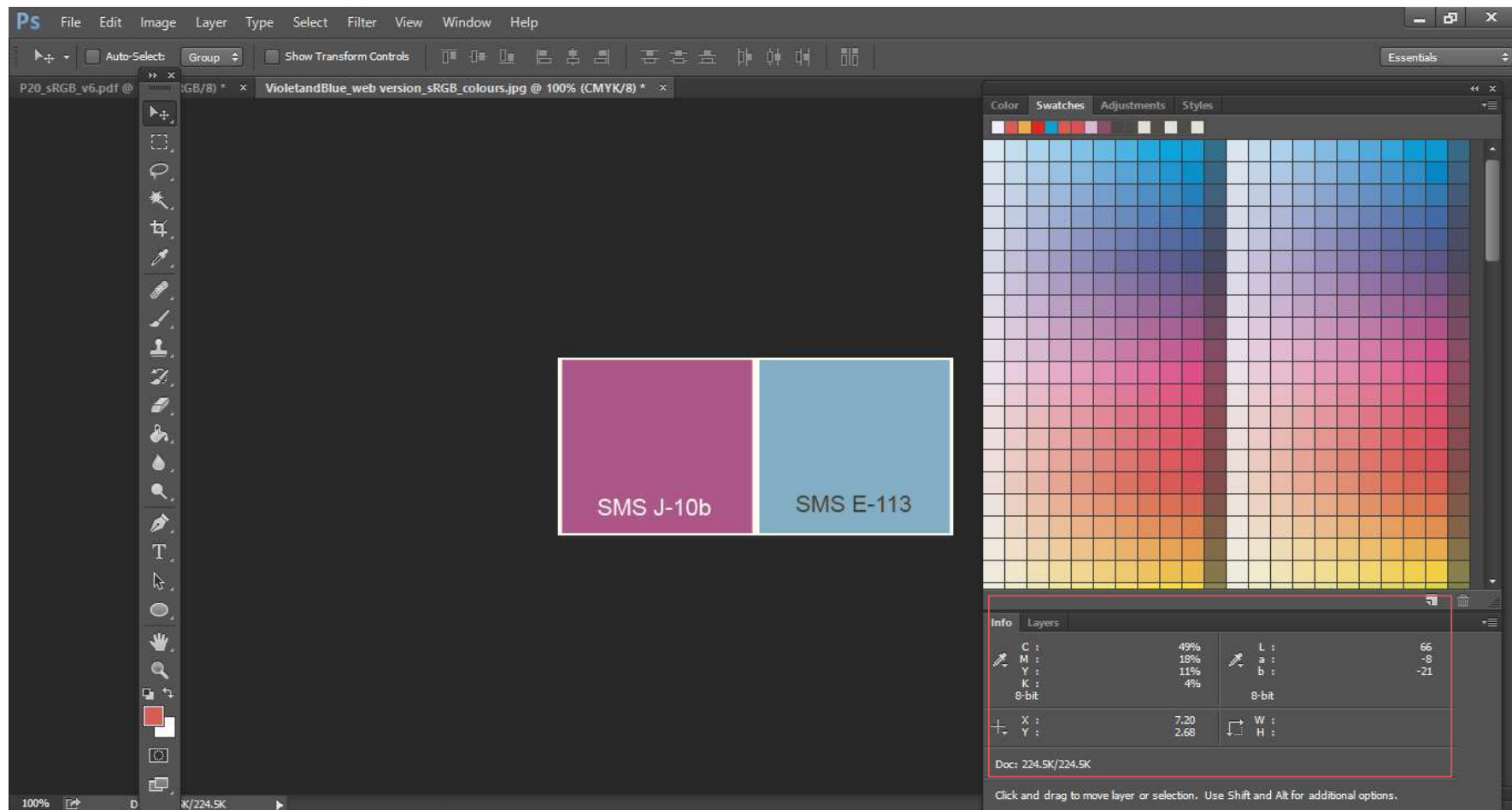


Select CMYK - Working CMYK - PSO Coated v3.
Intent: Absolute Colorimetric
Uncheck Use Dither as shown



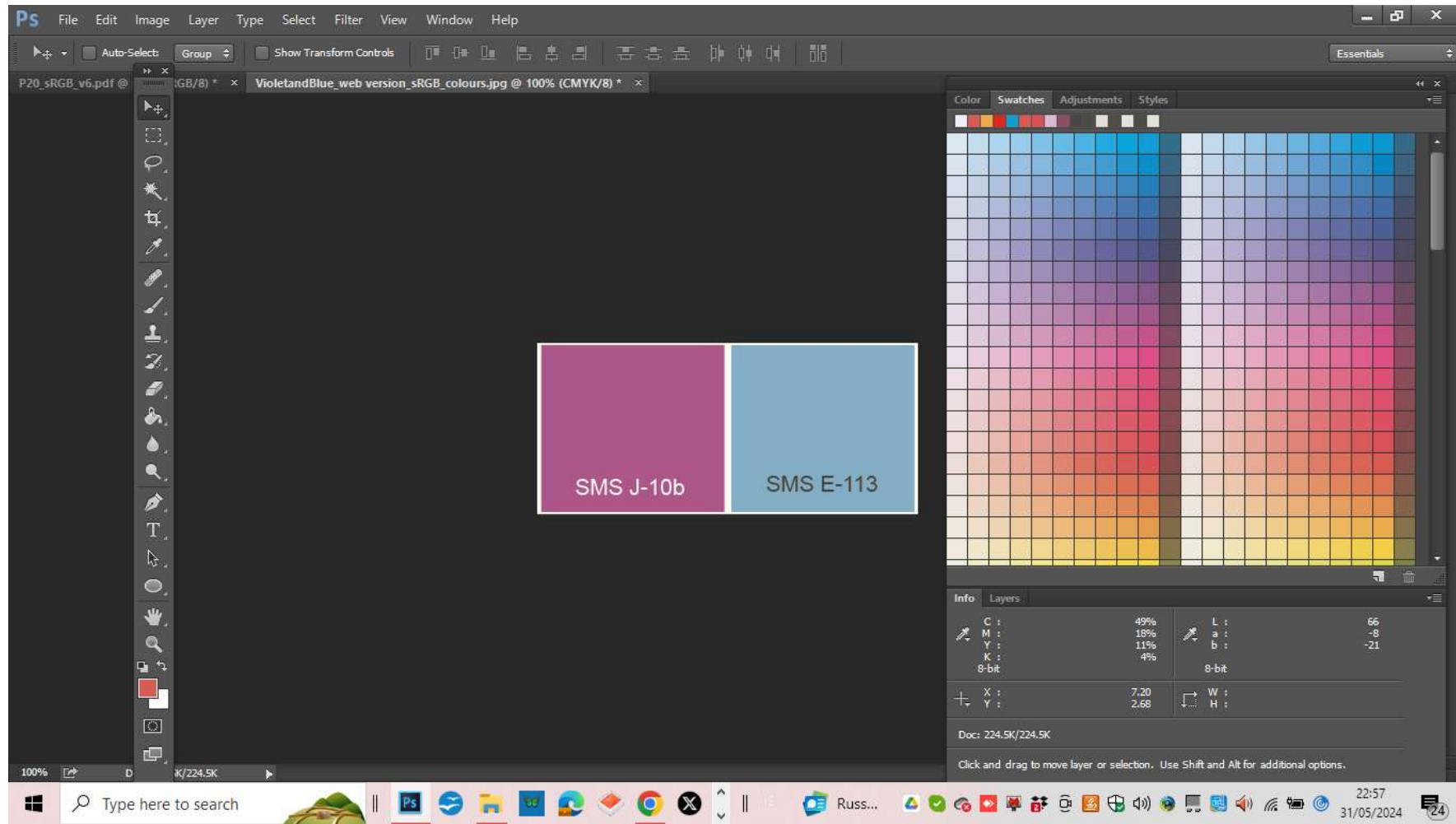


Now notice that the CMYK values have changed slightly but the LAB values remain the same.



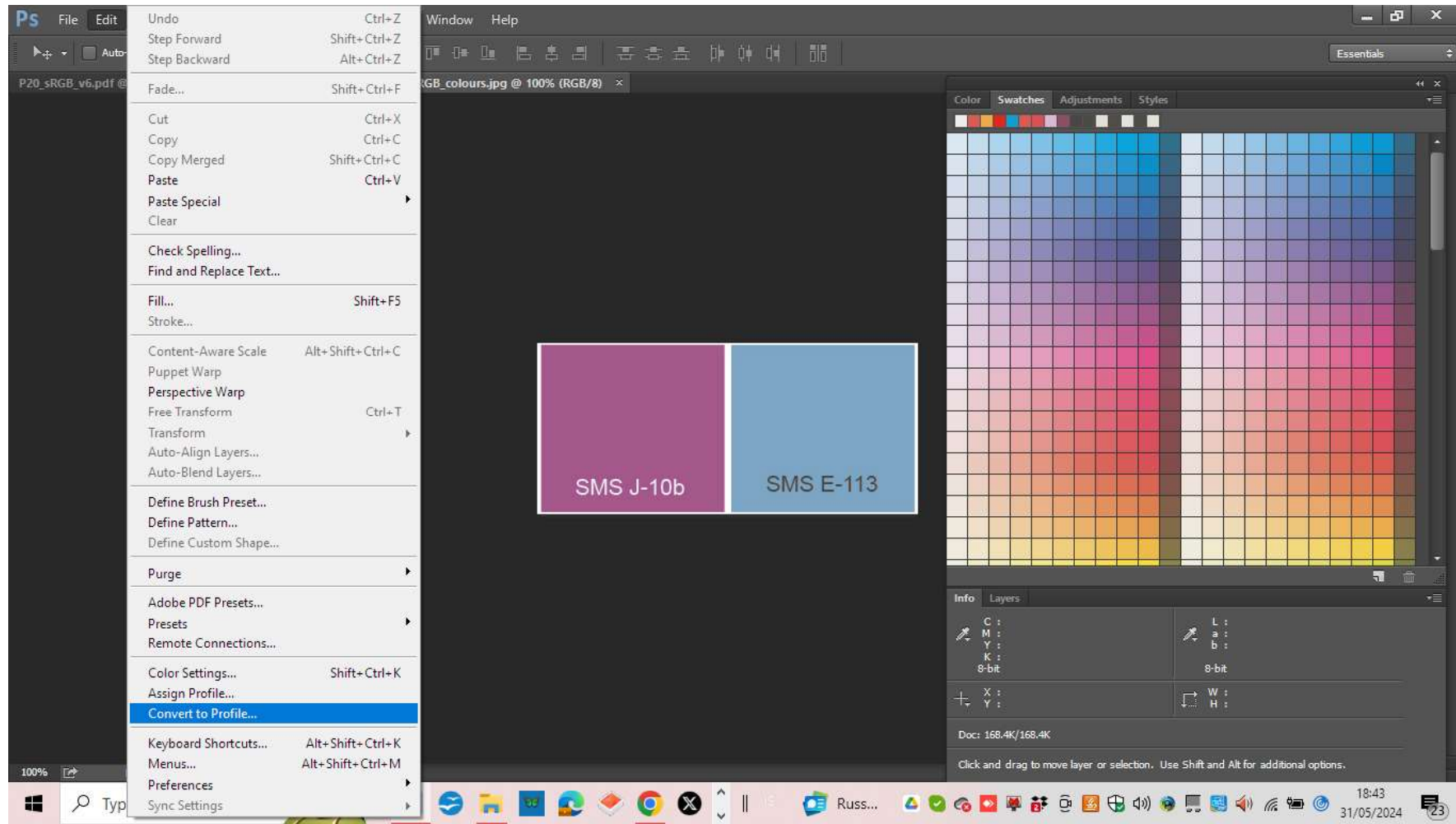


Save in your customer's folder in jpg format as
Name of your choice_Fogra 51_Coated_paper
Remember to *embed the icc profile* when you save it.



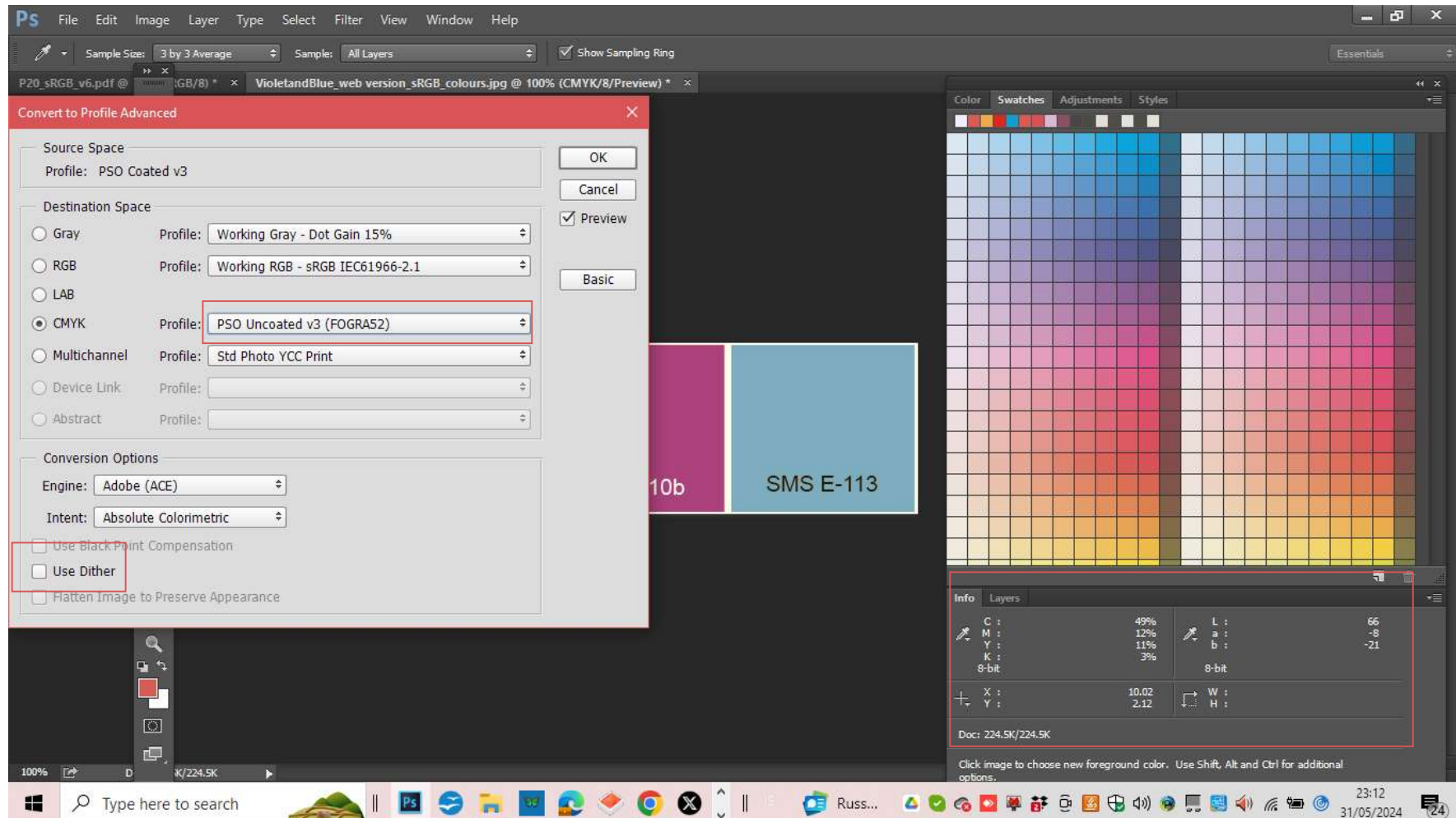


Close the file (don't save it) and then open the sRGB jpg again. Select Convert to profile again.





Convert to PSO Uncoated v3 (for the office material)
Notice now that **CMYK** values change radically while
the **LAB** values remain almost exactly the same.



The screenshot displays the Adobe Photoshop interface with the 'Convert to Profile Advanced' dialog box open. The dialog is configured for a color conversion from 'PSO Coated v3' to 'PSO Uncoated v3 (FOGRA52)' in the CMYK color space. The 'Use Dither' checkbox is checked, and the 'Intent' is set to 'Absolute Colorimetric'. The background shows a color calibration chart and a color bar with labels '10b' and 'SMS E-113'.

Convert to Profile Advanced

Source Space
Profile: PSO Coated v3

Destination Space

- Gray Profile: Working Gray - Dot Gain 15%
- RGB Profile: Working RGB - sRGB IEC61966-2.1
- LAB
- CMYK Profile: PSO Uncoated v3 (FOGRA52)**
- Multichannel Profile: Std Photo YCC Print
- Device Link Profile:
- Abstract Profile:

Conversion Options

- Engine: Adobe (ACE)
- Intent: Absolute Colorimetric
- Use Black Point Compensation
- Use Dither**
- Flatten Image to Preserve Appearance

Color Swatches Adjustments Styles

Info Layers

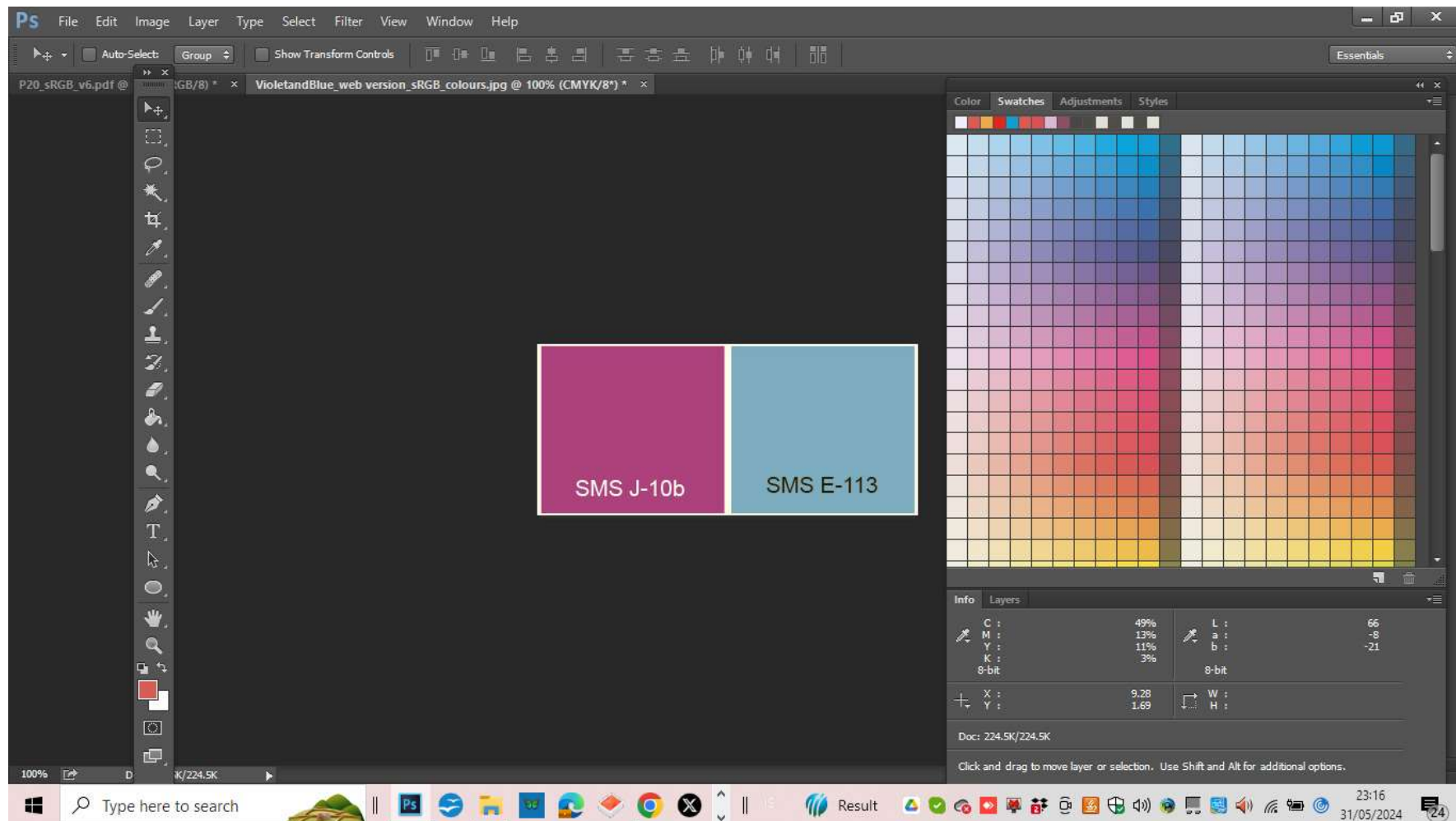
C :	49%	L :	66
M :	12%	a :	-8
Y :	11%	b :	-21
K :	3%		
8-bit		8-bit	
X :	10.02	W :	
Y :	2.12	H :	

Doc: 224.5K/224.5K

Click image to choose new foreground color. Use Shift, Alt and Ctrl for additional options.

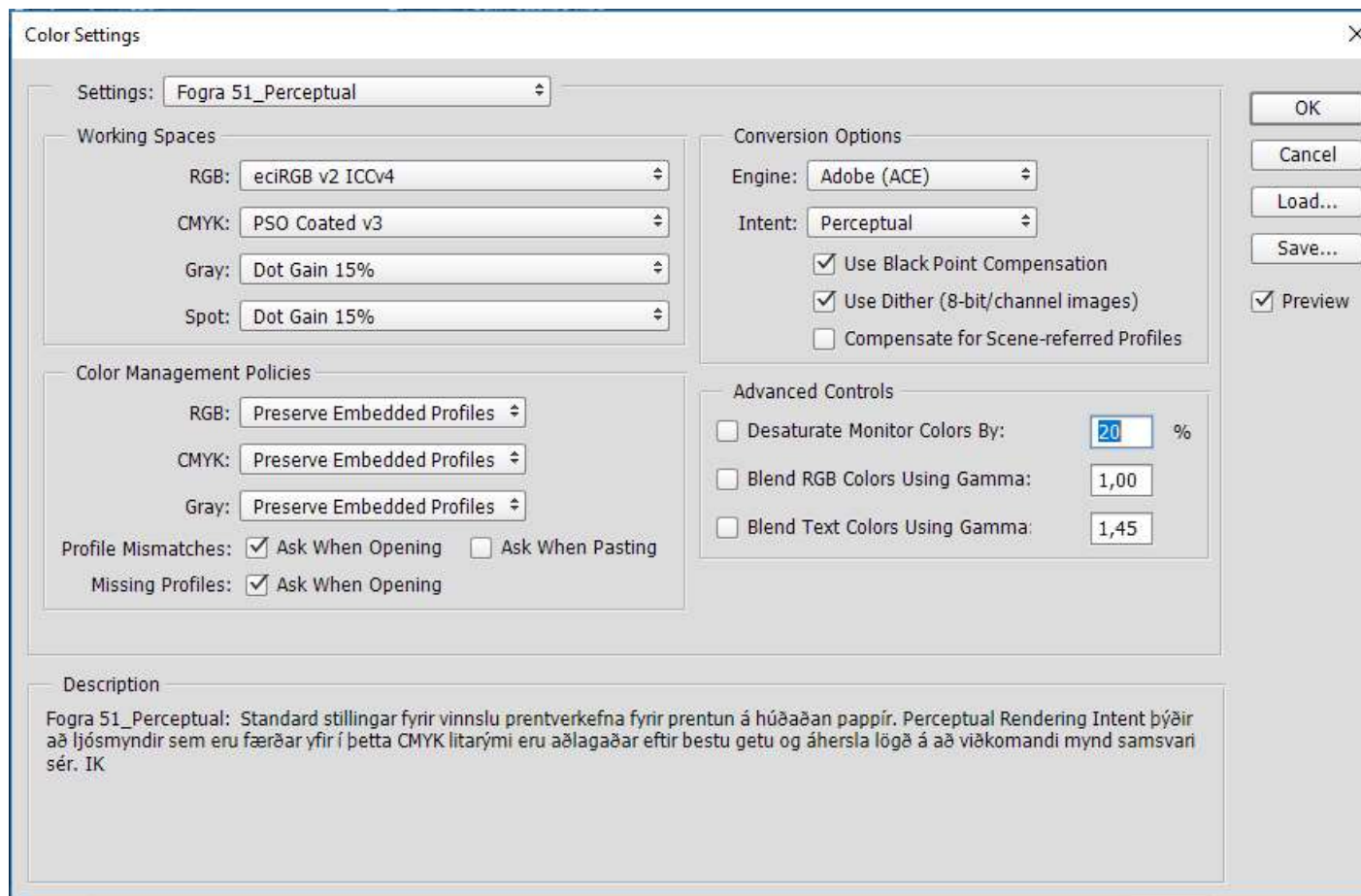


Save the file in your customer's folder in jpg format as
Name of your choice_Fogra 52 version_Uncoated_paper.
Embed the CMYK icc profile with the file.





Before you begin preparing your print documents, set your workspace correctly. In our example before you begin work on the Fogra 51 document, we propose the following settings:



The screenshot shows the 'Color Settings' dialog box with the following configuration:

- Settings: Fogra 51_Perceptual
- Working Spaces:
 - RGB: eciRGB v2 ICCv4
 - CMYK: PSO Coated v3
 - Gray: Dot Gain 15%
 - Spot: Dot Gain 15%
- Conversion Options:
 - Engine: Adobe (ACE)
 - Intent: Perceptual
 - Use Black Point Compensation
 - Use Dither (8-bit/channel images)
 - Compensate for Scene-referred Profiles
- Color Management Policies:
 - RGB: Preserve Embedded Profiles
 - CMYK: Preserve Embedded Profiles
 - Gray: Preserve Embedded Profiles
 - Profile Mismatches: Ask When Opening, Ask When Pasting
 - Missing Profiles: Ask When Opening
- Advanced Controls:
 - Desaturate Monitor Colors By: 20 %
 - Blend RGB Colors Using Gamma: 1,00
 - Blend Text Colors Using Gamma: 1,45
- Description:

Fogra 51_Perceptual: Standard stillingar fyrir vinnslu prentverkefna fyrir prentun á húðaðan pappír. Perceptual Rendering Intent býðir að ljósmyndir sem eru færðar yfir í þetta CMYK litarymi eru aðlagðar eftir bestu getu og áhersla lögð á að viðkomandi mynd samsvari sér. IK

Buttons: OK, Cancel, Load..., Save..., Preview (checked)

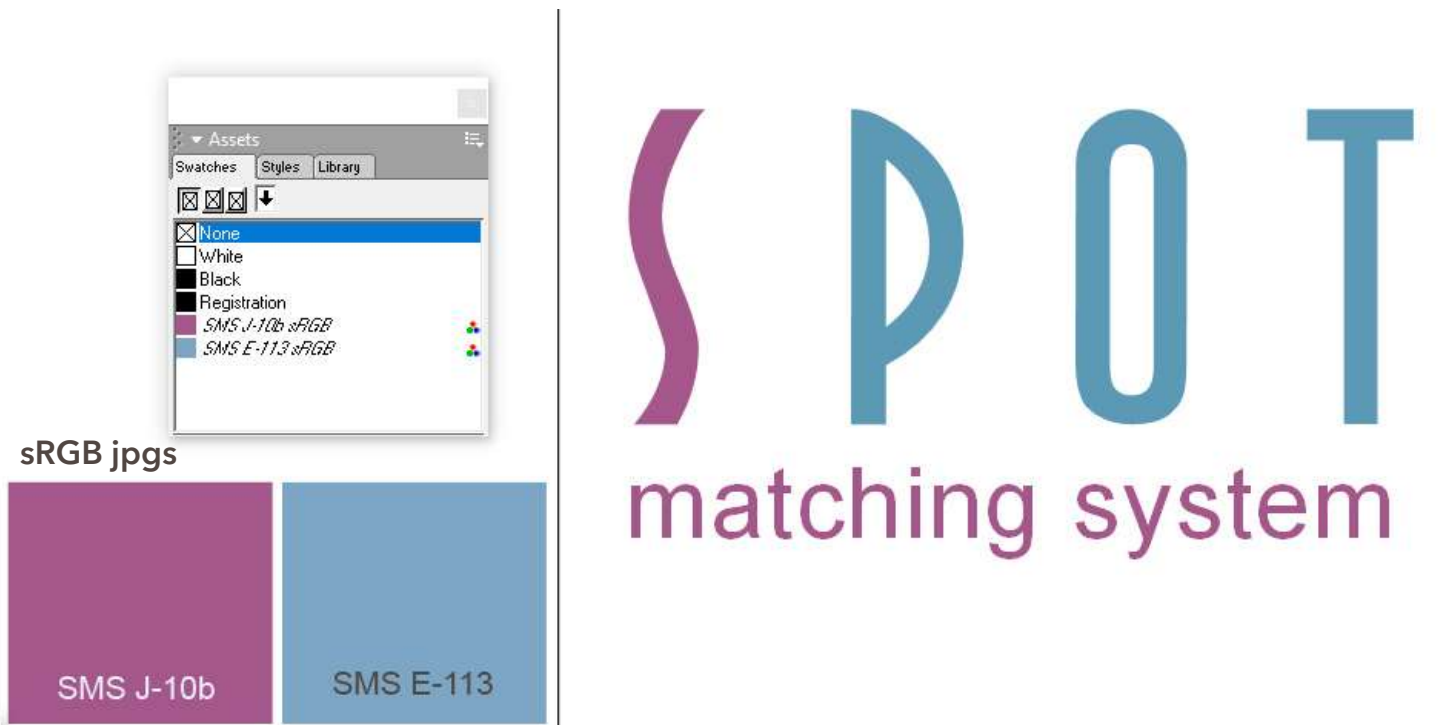
You may prefer using the Adobe RGB colourspace and Relative Colorimetric Rendering Intent - or perhaps your Printer prefers this. That is fine as well and will not affect your SMS colours.



Open the documents you created in sRGB format, one at the time. Start with the documents created for printing on coated paper, where you need to change the colours from sRGB to Fogra 51.

Import your SMS colour jpg's in Fogra 51 format to your workspace and use the Eyedropper tool to replace the sRGB colours in your colourpalette with the same colours in Fogra 51 format.

The colours of your entire artwork should be automatically updated to the Fogra 51 colours. Double check them in your artwork to be sure that they have been changed to your new colours. Change them manually if you have to.





Name the new colours in your colour palette SMS number_Fogra 51

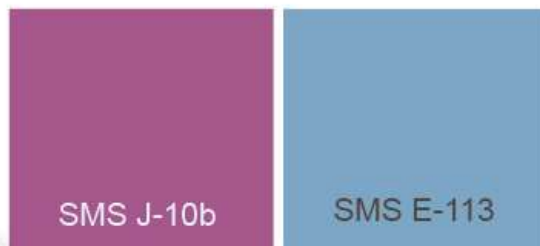
Replace any low resolution images within your document with high resolution images.

Save your document as Name of your choice_Fogra51 and then save it as PDF with the Fogra 51 icc profile embedded if possible. Now your document is ready to be printed to Fogra 51 standards.

Use the same method to prepare your files for printing to Fogra 52 - or any other print condition you chose to use, - just as long as it is included as a print condition for your SMS colour palette (see slide 3).



Fogra 51 jpps





If one day you need to use other colour systems than SMS for a specific purpose, there are some methods to do this.

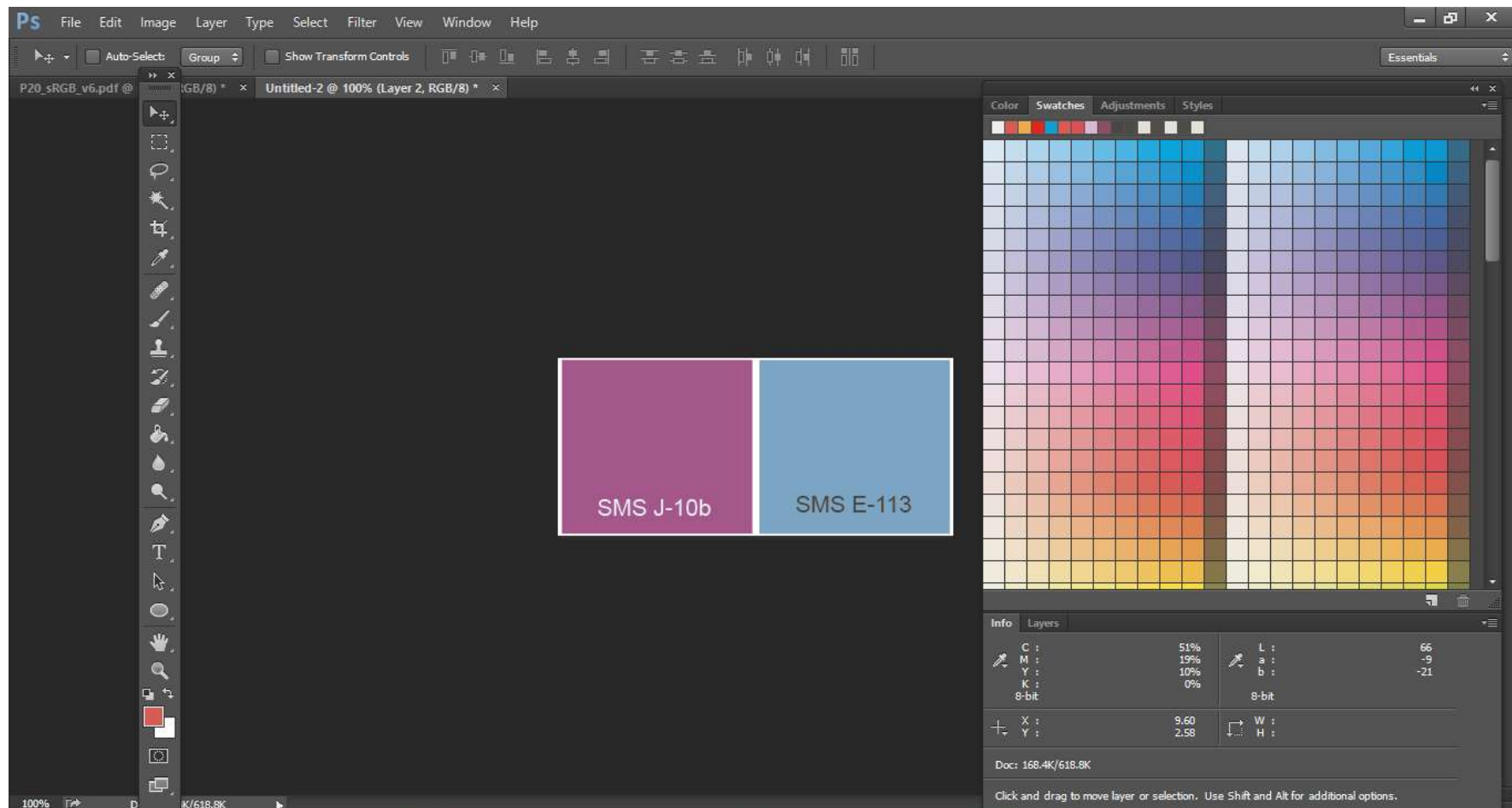
Let's start with the easiest one, that you can do by yourself.

If you have those libraries built into your application, you can locate the closest colour to your SMS colour in that library.

For instance, if you have access to the Pantone libraries from within your app, it is easy to locate the closest Pantone colour.

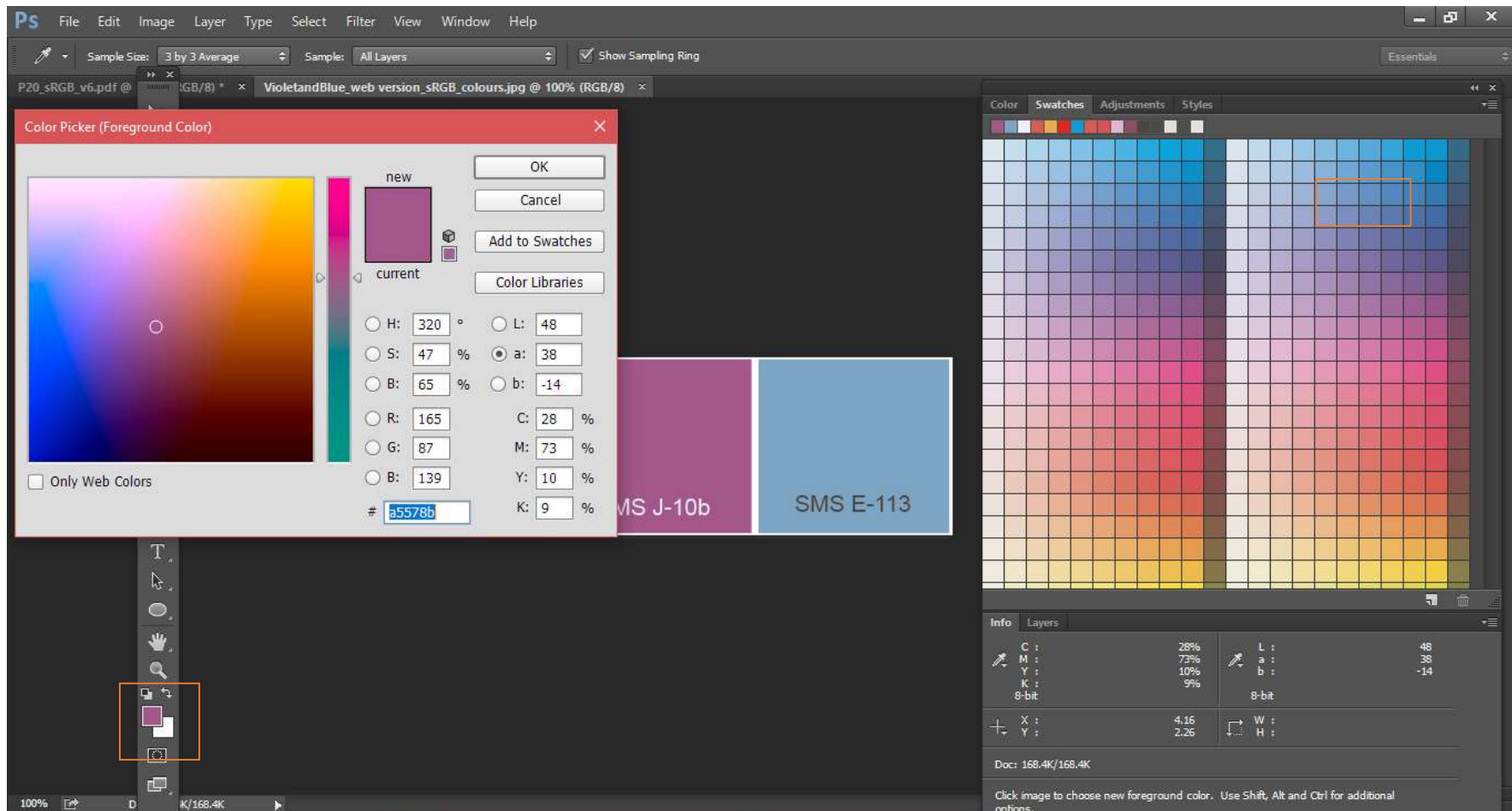


Here is how you do it in Photoshop.
Open your original sRGB jpg image.



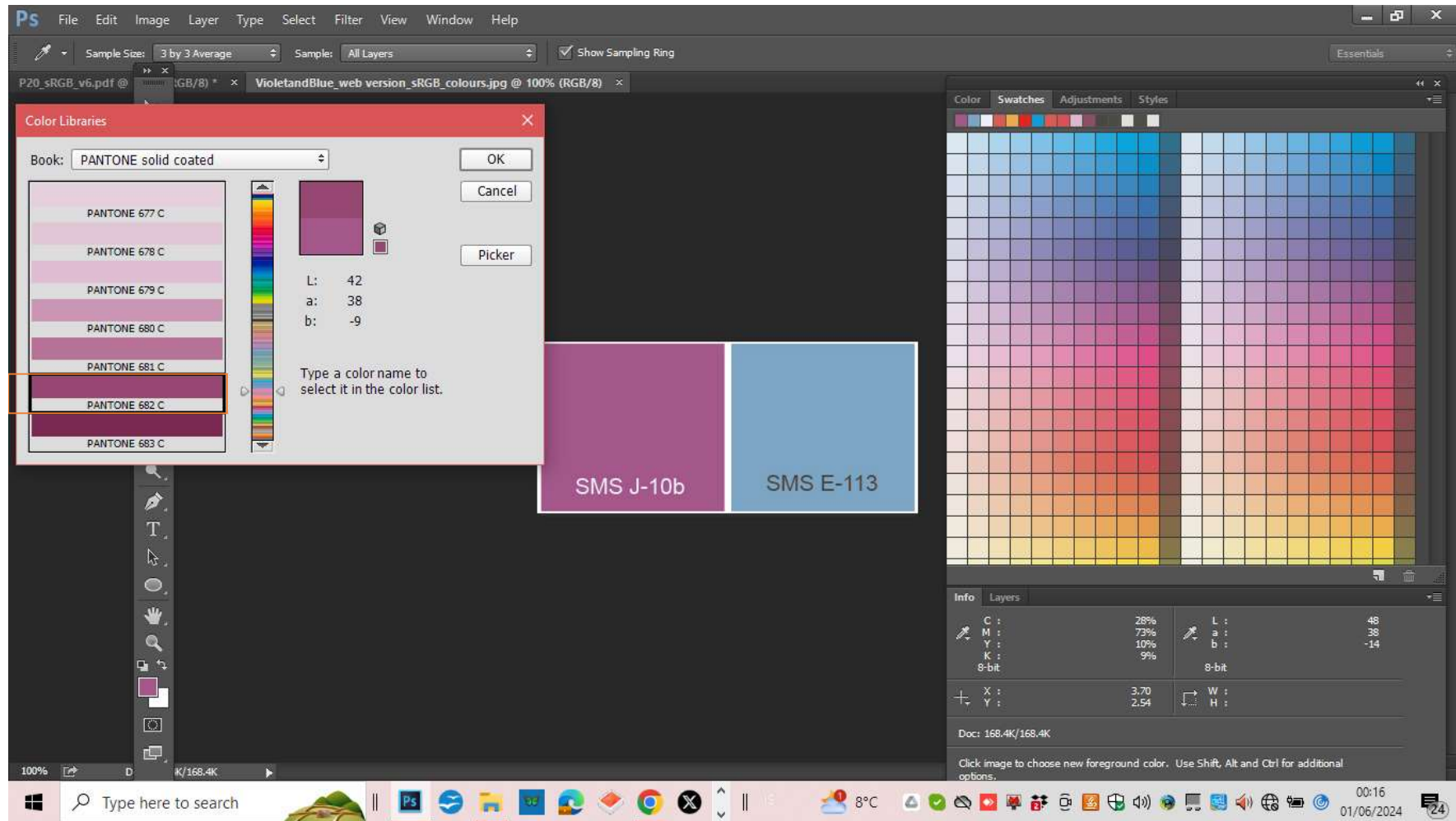


Pick your first colour with your eyedropper
and then open your colours.





Select „Color Libraries“ and select „Pantone Solid Coated“.
The closest colour will appear, PMS 682C in this case.



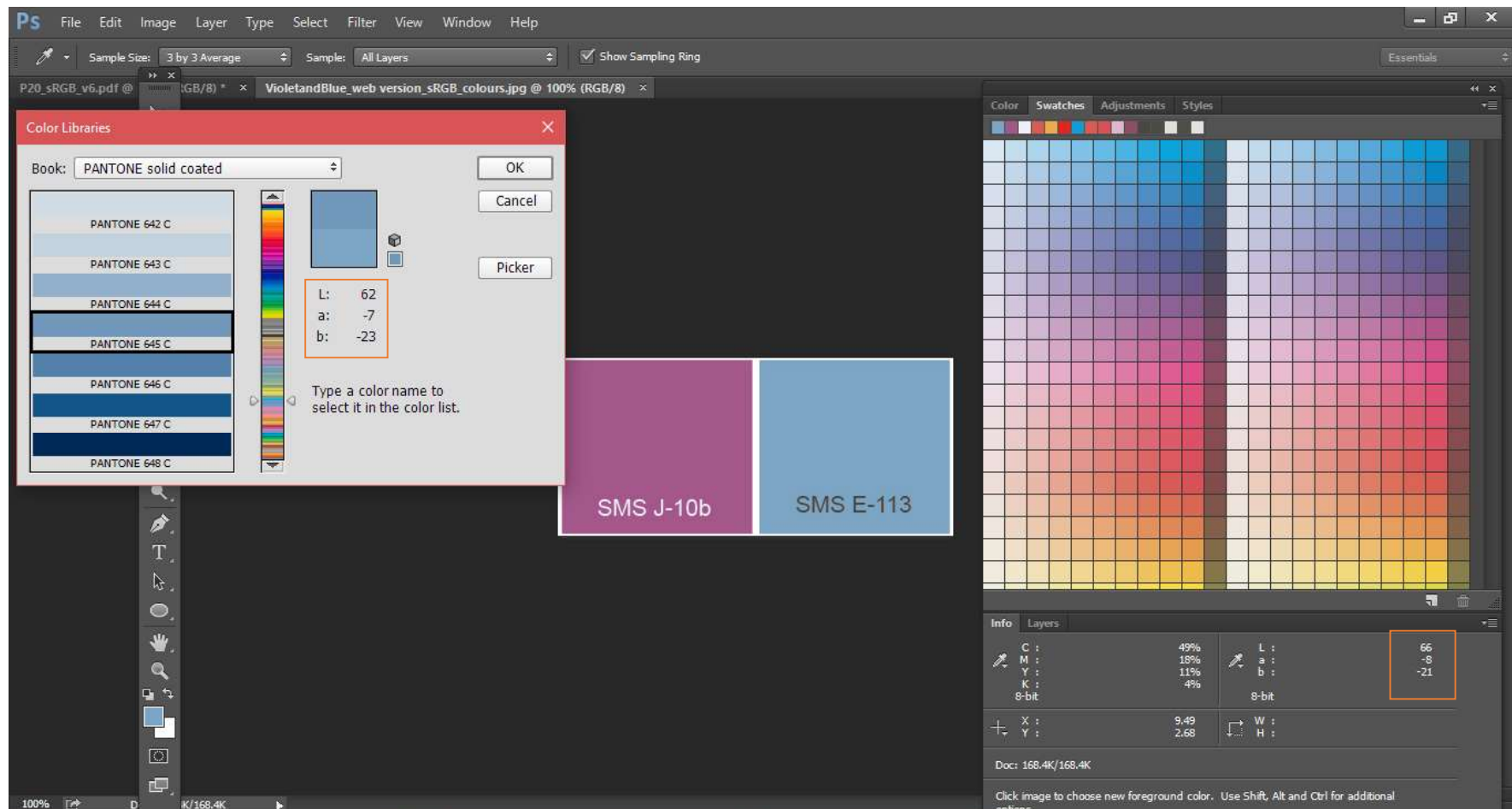


It is not perfectly identical to your SMS colour - but it is the closest standard Pantone C colour for printing on coated paper.

A screenshot of the Adobe Photoshop interface. The "Color Libraries" panel is open, showing the "PANTONE solid coated" book. A color swatch is selected, and its Lab values are displayed: L: 42, a: 38, b: -9. Below the panel, two color swatches are shown: "SMS J-10b" (purple) and "SMS E-113" (blue). The "Info" panel at the bottom right shows the Lab values for the selected color: L: 48, a: 38, b: -14. The Photoshop interface includes the menu bar, toolbars, and various panels like Swatches, Adjustments, and Styles.

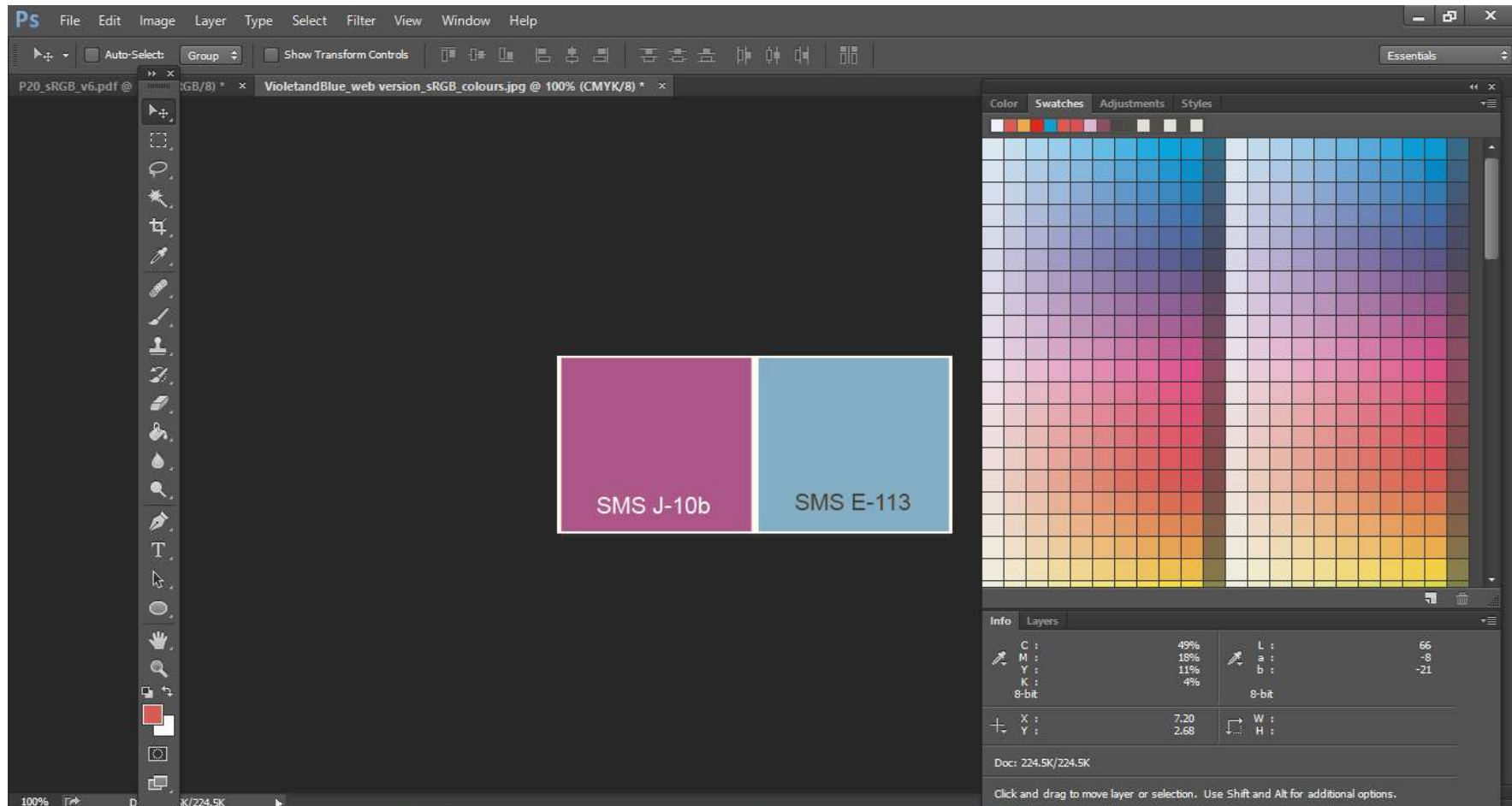


Now repeat this procedure with your other colour(s) -
- the light blue colour in our example.
The closest Pantone C colour in this case is PMS 645 C.



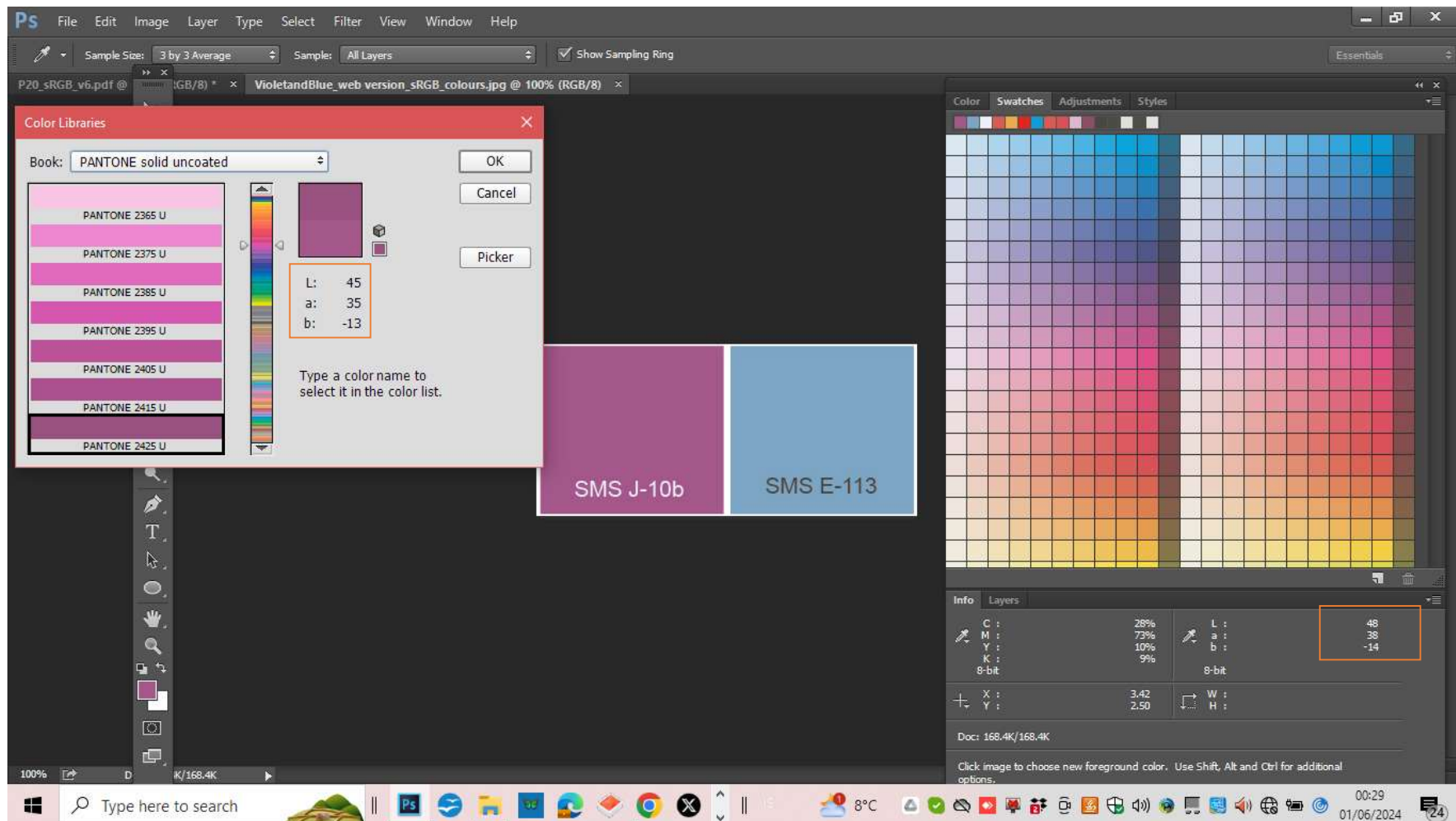


Now let's see which Pantone colours may be suited for printing on uncoated paper to match your SMS colours as closely as possible.



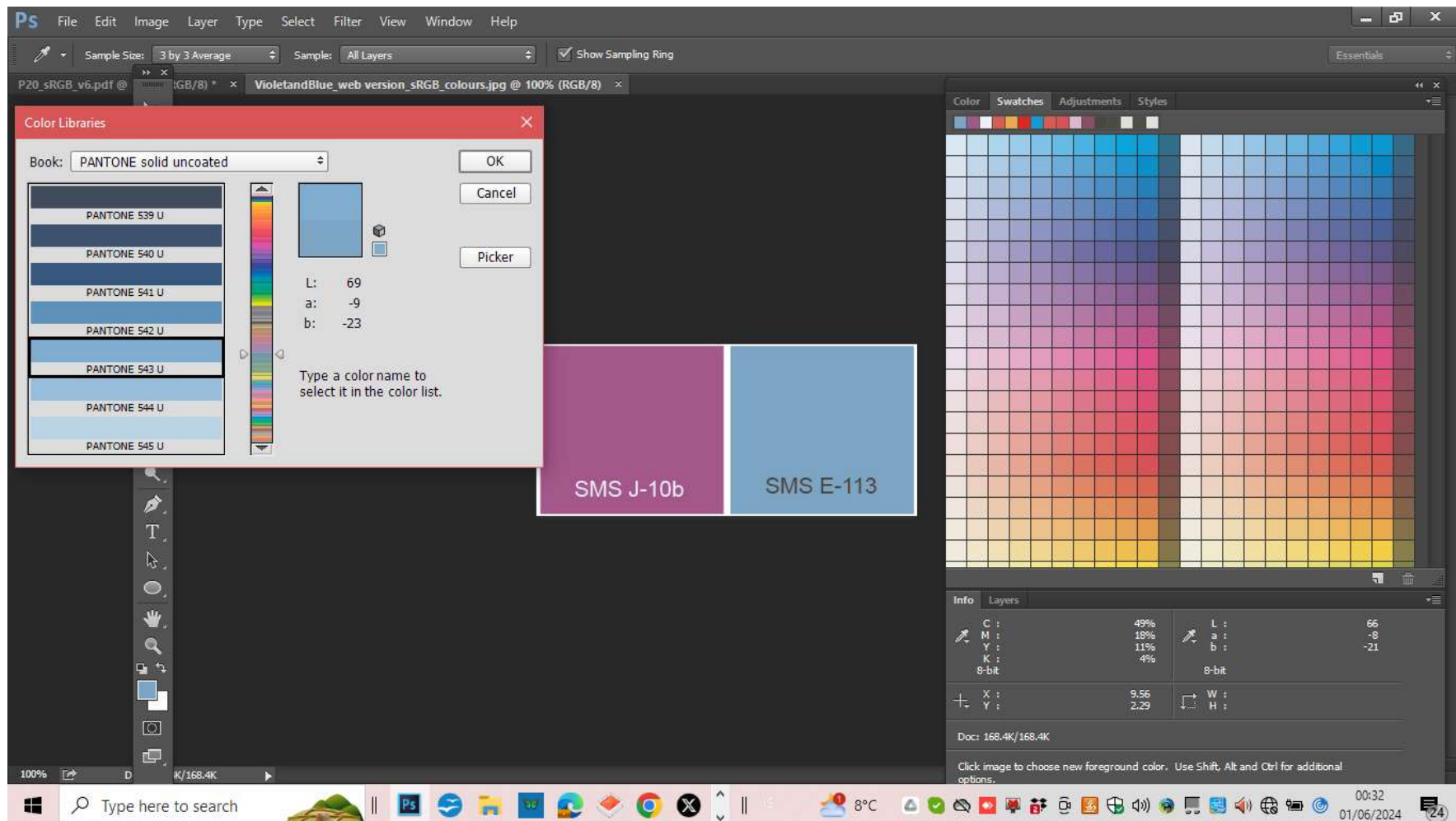


Now select the PANTONE Solid Uncoated colour book.
The closest standard Pantone colour for printing
on uncoated paper is in this case PMS 2425 U.





- and the closest light blue Pantone colour for printing on uncoated paper is PMS 543 U.
Not exactly the same LAB values - but quite close.



The screenshot shows the Adobe Photoshop interface with the 'Color Libraries' panel open. The 'Book' is set to 'PANTONE solid uncoated'. The color picker shows the selected color is PANTONE 543 U, with LAB values: L: 69, a: -9, b: -23. Below the color picker, two color swatches are shown: SMS J-10b (purple) and SMS E-113 (light blue). The 'Color' panel on the right shows a color chart with a grid of colors. The 'Info' panel at the bottom right shows the current color's values: C: 49%, M: 18%, Y: 11%, K: 4%, 8-bit; L: 66, a: -8, b: -21, 8-bit. The document size is 168.4K/168.4K.



For precision branding of your SMS colours note:

Besides converting your SMS colour by yourself to the closest standard colour from another colour library, if you need to manufacture clothes or shoes or any other tangible product, or say, if you want to paint your headquarters in your SMS colours, you have 2 other options, that are suggested to keep your SMS colours as correct as possible.

This is recommended if the colours you found by yourself are not close enough to your SMS colours in your opinion, if you simply don't know what colour system your printer or manufacturer is using, - or if you don't have access to the colour palette from within your application.



For precision branding of your SMS colours note:

1) For more advanced manufacturers:

Send them the LAB value of your SMS colours along with your sRGB jpg by email.

For indoor usage in normal LED lighting, ask them to ensure that the LAB value of the resulting colours be the same as your SMS colours, when measured with a 0/45 spectrophotometer, D50/2° viewing angle with the appropriate M standard selected.

For outdoor use, for instance signs typically viewed from afar, a more appropriate measurement standard might be D65 lighting and a 10° viewing angle.

SMS subscribers may contact sms@spot-nordic.com for assistance in communicating the SMS colours correctly.

2) For more and less advanced manufacturers:

Send them a printed, certified SMS colour ticket with your SMS colours and ask them to match your colours manually in production.



For bigger brands consider SMS subscription

If you are approached by a big company, brand or institution that values visual consistency in their marketing, please consider subscribing them to SMS.

Included in the SMS subscription are all 3 SMS colour palettes in sRGB format (P20, P20e and P20x) that you use when setting up your design.

As an SMS subscriber it is also optional to have ANY colour or any logo converted to the SMS colour palette you want to use.

Once your customer has approved your design, you simply order the required CMYK variations of their SMS colours from sms@spot-nordic.com.

Spot-Nordic can contact Printshop(s) and manufacturers of SMS subscribers to find out where they stand from a technical point of view – whether they can in fact be trusted to print your SMS colours to standards – or not – see www.spotmatchingsystem.com/printers.

The cost of SMS subscription is EUR 600 per brand, per year.

Contact sms@spot-nordic.com to order, or for more information.



Before getting started on your first SMS colour project

Please study the difference between our Standard, ECO and MAX systems before you order your SMS system – see www.spotmatchingsystem.com/services

Follow the instructions at www.spotmatchingsystem.com/gettingstarted and make sure that you use the correct variation of your SMS colours for each occasion.

Experiment with your SMS colours, do a few conversions to different colour spaces to get used to working with SMS colours in your apps. Watch the LAB values as you do your conversions.

If you are working with RGB images in Adobe RGB colourspace, alongside your SMS CMYK colours, that is fine.

For CMYK printing, the SMS colours should always be in their final CMYK version and your Printer should leave them as they are but convert the RGB part of your design to the CMYK destination.

Contact sms@spot-nordic.com to order or for more information. If your Printer or your manufacturer has questions about SMS colours, ask them to contact us and we will be glad to assist.



Using the SMS ASE palettes

When you buy the SMS Standard v6 colour palette for instance, you get the palette both in PDF and ASE format.

If you are strictly a web designer, it is safe to use them directly as they are. If you need to keep track of which SMS colours you are using, we recommend using the SMS bitmaps, as described here.

The steps of this presentation may take some time, but they help you keep track of which documents are sRGB and which are in some other format – and of course to create all the colour palettes you need for each customer.

SPOT

matching system



www.28.11.2018 16:08 PISO Coated +3 (3) - V1 - 181 - Epson_SCP7000_720x1440dpi
Epson_SCP7000 - 192 168 1 88 - Job_3113 - 840 layout final_A3_GAO Figura 11_mod av
www.28.11.2018 16:09 PISO Coated +3 (3) - V1 - 181 - Epson_SCP7000_720x1440dpi

5.214 Colours for
21st Century Design

www.spotmatchingsystem.com

Thank you for your attention!